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The Museum as an Inclusive Community:
A Blueprint for Moving Forward

Central Washington University Graduate Program

Master's Thesis

Presented by

Howard P Scott

CENTRAL WASHINGTON UNIVERSITY

Graduate Studies

We hereby approve the thesis of

Howard P Scott

Candidate for the degree of Master of Science

APPROVED FOR THE GRADUATE FACULTY

Dr. Kathleen Barlow, Committee Chair

Dr. Mark Auslander

Dr. Hope Amason

Dr. Michael Ogden

Dr. Kevin Archer, Dean of Graduate Studies

ABSTRACT

The Museum as an Inclusive Community:

A Blueprint for Moving Forward

by

Howard Paul Scott

November 2014

The focus of this study is museum accessibility for patrons with disabilities. The history of museums and their evolution into institutions that strive to create an inclusive community means that many aspects of the Americans with Disabilities Act of 1990 as well as the Architectural Barriers Act of 1968 are applicable. Developing a tool for assessing museum compliance with the law was key to gathering data to use for improving compliance with the law. Using this data and comparing current compliance in four museums to three major legal cases against museums showed common areas for improvement in accessibility in all facilities involved in this study. Technical solutions for creating an inclusive museum are pulled from legal settlements as well as accessibility websites and presented here.

Key words: compliance, inclusion, disabilities, enforcement, ADA law

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Lastly, I would like to thank the United States Government for its constant vigilance and active support of people with disabilities. This is the reason we have the laws that help make life more fulfilling for those with physical and intellectual challenges. It is comforting to know that they look after their own.

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CHAPTER I

INTRODUCTION

This project is a study of accessibility for patrons with disabilities visiting museums. Museums were once held apart as places of scholarly research. In much of Europe and America inclusion once referred to allowing persons of a lower economic standing to visit a collection. Today inclusion means everyone of any economic situation or ability.

According to the Oxford Encyclopedic English Dictionary (1991) “accessibility” has been defined as “easy to reach” or as “coming near.” In the Barnhart Dictionary of Etymology (1988) a 1961 additional definition was entered under this word in reference to art and writing, “able to be readily understood.” Nowadays accessibility is about accommodating people of varying physical and cognitive abilities and is defined by law. Just as the concept of accessibility has evolved, so Museums have evolved to become destination places for tourists (Ambrose, T., Paine C., 2002.), places where field trips from schools and senior centers occur nearly every day. Traveling exhibits to schools and other institutions bring the museum to people who are not able to come to the museum facility.

Discovering Varying Museum Experiences

Inspired by both life experience with disabilities and an appreciation of museums, I began with the fact that people with varying physical abilities visit museums and have less than optimal experiences. My initial question was how children with disabilities interact with museums. As my research progressed I

realized that the question really involved all people of all abilities and their experience as museum patrons. I discovered that modern museums often have commercial, for-profit components such as gift shops, bookstores, or restaurants associated with them. Such places of public accommodation, as defined by the Americans with Disabilities Act of 1990 (ADA), are subject to enforcement of accessibility laws. When I reviewed the ADA I saw how it defined “places of public accommodation” and why it applies to museums as well as associated gift shops, bookstores and restaurants. Drawing on the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973 (RA), I developed my argument that there is a need for ways to assess museums for compliance with these laws. The ADA is about more than museums and places of collection and display. Civil litigations have occurred in the states of California, Florida, and New York. These actions were focused on parking lots, convenience stores, banks, hotels, grocers, public transportation, restaurants, and bookstores, but museums also need to conform to legal standards.

Few museums in this country have fully addressed in practice the ideal of the inclusive museum for everyone. Several problems exist in how museums address even legal accessibility. Because the ADA began as an unfunded federal mandate, museums must bear the financial burden for many of the necessary changes.¹

¹ In the current revision of the RA and a newly enacted Workforce Innovation and Opportunity Act (WIOA) the federal government has provided funding through state agencies to increase employment opportunities for individuals with disabilities. Employment is not the focus of this study but will become an issue for museums should the federal government impose a form of affirmative action requiring museums to hire persons with disabilities.

As with many laws, application of ADA is a work in progress. Nevertheless, opening up museums to millions more Americans is an important goal, because it brings those people the resources, tools and accessibility they need to live fulfilling lives.

History, Laws and Museum Compliance

This study explores the history of the museum industry and the history of the disability rights movement in America, and presents discussions of three settlements between museums and the Department of Justice (DOJ) in regards to accessibility. It also provides a checklist for testing a museum's compliance and recommendations for gaining compliance voluntarily. The cost of coming into compliance can be overwhelming to museums of any size and there is little federal support beyond tax credits for required technology and building remodeling. The challenge for most museums is that noncompliance can be an even costlier problem considering the scope of lawsuits in recent years. Several class action lawsuits filed by private citizens and groups such as the National Federation of the Blind have set precedents for similar lawsuits throughout the United States.

There are solutions. In New York City, a consortium of museums, art galleries, and science centers have focused on being inclusive for persons with varied disabilities. From correspondence with Museum Access Consortium (MAC) I learned that they have inspired a second consortium in Boston. These consortia represent an example of a larger plan. In their own literature, museum professionals write about cultural education presented through interpretation. Their audience is meant to be everyone. Museums strive to be part of the community. But the larger

plan is to become part of an inclusive community. These requirements, mandated by federal laws, benefit everyone.

I myself have been to places where the social atmosphere was less than inviting, where an art gallery's security was less than friendly. My interest in this subject is inspired by more than philosophical interest. I am told I walk with a noticeable shuffle. I am surprised I walk at all. This is a personal topic, one for which I am a stakeholder.

A Personal Reflection

I do not think of myself as having disabilities. I have adjusted to limitations discovered in my pursuit of happiness, some of them anyway. Having a condition called Traumatic Brain Injury (TBI) offers many limitations to my day. For one, I process information differently, and become frustrated when I've found a new limitation to which I must adjust. I have good teachers and friends who have helped me accommodate these challenges, which are invisible to others.

I was young at nineteen, and woke up old. In a moment's breath I could have died. I have no memory of the car colliding with my motorcycle. What I know of the place and day came from reading statements of witnesses, the responding officer, and walking the place where it happened. I was in a coma for eleven days, in traction for six weeks. I remember motion sickness during water therapy. It took me two years to regain my confidence to walk unassisted. I can tell you there was no pain, at first. All I remember of that day was a very bright white light, no tunnel.

But this is just part of my story. I also lost childhood memories, and all those days before. I've attempted dream therapy, yoga, meditation, and Potential Learning Institute, in an effort to regain some of the memories lost. I've become a stranger at family reunions, as I have no memory of people I should know.

I have never put such a fine point on this topic as I am writing this now. I have always referred to my accident as a science experiment I conducted: Inertia, velocity, gravity, force, and that sudden stop. The accident was instantaneous, but the recovery and consequences have been long-term. I became part of a national statistic (Figure1).

A common occurrence for persons who have experienced trauma and spent a great deal of time in the care of hospitals and therapists is a sense of the importance of giving back to the community. Such people become nurses, or volunteer for non-profit organizations. Some become social workers

I have been employed as a Vocational Rehabilitation Counselor assisting persons with disabling conditions to gain employment, career training, and the tools and materials needed to perform those positions. The RA, Section 504 and Title I of the ADA defined the scope of practice.

I have been trained to perform work place evaluations to determine what reasonable accommodations would place or retain a person with disabilities in a job setting or career training. I received this and other skills during weekly in-service trainings provided by South Puget Intertribal Planning Agency, Washington State Department of Social and Health Services (DSHS/DVR) programs and the U.S.

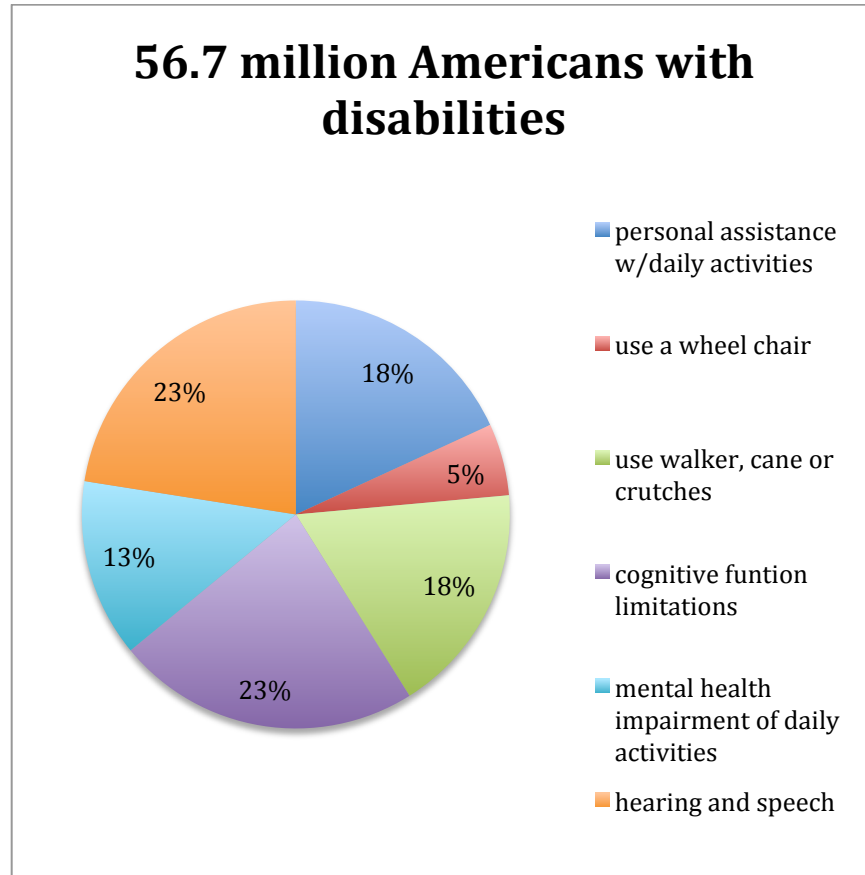


Figure 1.

The 56.7 million Americans who have a disability represent 18.7 % of the non-institutionalized population. Of these, 12 million adults need personal assistance with activities such as getting around the home, taking a bath or shower, preparing meals and housework . While the number of people aged 15 or older that use a wheelchair is 3.6 million, another 11.6 million use a walking aid such as a cane, crutches or a walker. The number of people with limitations in cognitive functioning such as Alzheimer's and Mental retardation outnumber those with a physical impairment at 15.2 million, including the 8.9 million with one or more problems that interfere with daily activities such as depression or anxiety or trouble coping with stress. (US Census, 2010)

I worked as a counselor for five years. During that time I became well acquainted with the variety and range of severities of physical and mental disabilities that can affect anyone, anytime. My interest in disabilities and accommodation is long standing. My pursuit of this topic and its relation to museums is ultimately, for me, a natural extension of knowledge gathered in my

previous career.

Americans with Disabilities Act Overview

This study focuses on the ADA, Titles II and III accommodations, where museums are named in the text of the law. Title II refers to facilities receiving direct funding from federal sources and federal, state and local government facilities, hospitals, schools, colleges and universities being compliant with laws providing accommodations.

Title III provides the following explanation about Public Accommodations. (ADA Title III Technical Assistance Manual Covering Public Accommodations and Commercial Facilities, accessed 9/19/12):

The broad range of title III obligations relating to “places of public accommodation” must be met by entities that the Department of Justice regulation labels as “public accommodations.” In order to be considered a place of public accommodation with Title III obligations, an entity must be private and it must; own, lease, lease to, or operate a place of public accommodation. A place of public accommodation is a facility whose operations affect commerce and fall within at least one of the following categories:

1. Places of lodging (e.g., inns hotels, motels), except for owner-occupied establishments renting fewer than six rooms;
2. Establishments serving food or drink (e.g., restaurants and bars);

3. Places of exhibition or entertainment (e.g., motion picture houses, theaters, concert halls, stadiums);
4. Places of public gathering (e.g., auditoriums, convention centers, lecture halls);
5. Sales or rental establishments (e.g., bakeries, grocery stores, hardware stores, shopping centers);
6. Service establishments (e.g., laundromats, dry-cleaners, banks, barber shops, beauty shops, travel services, shoe repair services, pharmacies, insurance offices, professional offices of health care providers, hospitals);
7. Public transportation terminals, depots, or stations (not including facilities relating to air transportation);
- 8. Places of public display or collection (e.g., museums, libraries, and galleries);**
9. Places of recreation (e.g., parks, zoos, amusement parks);
10. Places of education (e.g., day care centers, elementary, secondary, undergraduate, or postgraduate public, or postgraduate private schools).
11. Social service center establishments (e.g., day care centers, senior centers, homeless shelters, food banks, adoption agencies).

12. Places of exercise or recreation (e.g., gymnasiums, health spas, bowling alleys, and golf courses). (ADA, 2010).

The ABA, the RA, and the ADA as civil rights legislation are the result of a long social history. Neglecting these responsibilities to the safety of elder patrons and persons with disabling conditions may result in accidents or if reported to the DOJ, may result in a civil action with punitive costs. In an effort to avoid problems with ever aging and highly mobile patrons and other individuals who may or may not have use of assistive appliances, I am pursuing this study to identify and offer remedies for issues of concern for museums. Once museums, (libraries, galleries, and places of collection and display) begin to identify inaccessible features and correct them, they will be less likely to be involved in settlements resulting from litigation, such as that involving the International Spy Museum in Washington, D.C. in 2008, the Mount Vernon Estate and Gardens in Virginia in 2010; and most recently the Newseum in Washington D.C. in 2013. Museums and galleries will gain more positive publicity by openly participating in regional efforts to be part of an inclusive community.

In reviewing those three museum settlement reports of the DOJ, the federal agency tasked with enforcing accessibility laws (discussed in Chapter V), I noticed several of the original complaints were due to lack of accommodation found by individuals with disabilities. The settlements however, did more than address the specific accommodation issues that generated the complaint. They went further and

addressed problems defined by the ABA. In some cases the accommodation settlement was reported in a couple of pages, and the ABA violations continued for another twenty. Settlement costs may run as high as \$75,000 per infraction of the ADA, the ABA, or the RA. Should the agreed-upon terms of settlement with the DOJ not be acted upon or carried out according to the schedule outlined in the agreement, fines could go as high as \$150,000 per infraction. Then there is the cost of the modifications required by the DOJ. These are not merely suggestions; these are judgments based on laws.

Unlike the few pages of the ADA Title III Accommodation questions from NEA's website, the ABA information and materials about compliance requirements are too numerous not to have an assessment checklist for evaluating the accessibility of a museum exhibition whether in a museum's own facility or a leased one. Once identified, lack of accommodation and violations of accessibility requirements can be remedied, avoiding possible injuries, complaints of noncompliance with federal laws, and making exhibitions more accessible to everyone. To assess the legally defined accessibility of a facility, I found it necessary to develop an assessment checklist, a survey tool.

In the next chapter I explain how I developed my research. Chapter III covers a brief history of museums and their evolution as a cultural institution. In chapter IV I relate how the history of disabilities interrelates with the history of accessibility and museums. Three recent legal cases involving museums are discussed in Chapter V. The development and implementation of my museum accessibility checklist and

the results of my research in four case studies are revealed in Chapter VI. Following this, Chapter VII discusses assistive technology history and what the DOJ is recommending for museums in the Newseum case. Lastly, in chapter VIII, I discuss the present state of Museums and academic Museum Studies programs and how these institutions and programs can improve accessibility for the future.

CHAPTER II

METHODS

I enrolled in museum studies at Central Washington University and learned about the cultural evolution of museums. According to their own literature, museums and other cultural facilities are dedicated to educating visitors about the histories defining the places we live and the national achievement of other Americans defining art, theater, and culture. That setting can feel inhospitable to patrons with disabilities.

Research Beginnings

My interests in museums led me to volunteer at the local history museum, Kittitas County Historical Museum (KCHM). One afternoon while I was there, five persons visited the museum, four ladies and an older gentleman using a manual wheel chair. I noticed how difficult it was for this man to ascend one of the ramps at the museum, even though he had the use of his legs and feet to aid his mobility. Whatever a person's age, a disability can get in the way of enjoying what many people take for granted. This is my inspiration for asking: what can museums do or what are they required to do to improve the quality of a visit for every patron (including children), especially for those with physical or intellectual challenges?

So I began my research with this one question. First I canvassed libraries for literature on assistive technologies, and disability rights in education. Then I began subscribing to regional training centers such as the U.S. Department of Education, Rehabilitation Services Administration, a site I had trained with during my previous

career. From the announcements of trainings for independent living initiatives, sheltered workshops, universal design, and changes in laws mandating compliance, I developed a list of terms--words like accessibility, compliance, enforcement, and reasonable accommodation. From these word lists I began a Google search with phrases like; grant funding for museum projects for patrons with disabilities; museum responsibilities under the ADA; and cost of non-compliance for museums.

A few months before volunteering with the KCHM I had visited a special education program for K-12 teachers offered at Central Washington University. While I have experience with education, and with special needs children in K-12, having worked as a substitute Para-Educator, one of the classes I visited was for school psychologists. This program discussed the retention of students in general education classrooms. The speaker discussed that rather than losing instruction time by moving children to and from a separate resource room for intensive assistance in reading and other skills, a child would be assisted with class work and note-taking by a Para-Educator in the classroom. The process was called "Return To Intervention" (RTI). The school district I had worked for implemented this instructional program. Special needs children remained in the regular classroom for the majority of the day, and were able to participate in all the activities that the class experienced. Museums are often used to supplement material taught in schools, and children with special needs are included in these museum activities whether it is a travelling museum exhibit at the school or children traveling to a museum.

I began researching how museums accommodate special needs children on school field trips and how accessible traveling museum exhibits are for all the children who may experience a curriculum-oriented presentation. My curiosity along this line of inquiry led to extensive research.

Museums need to accommodate this new group of patrons. How can museums be made aware of needed changes before an incident or a litigation happens to their facility? Whenever there is a call for something to be scrutinized, thoroughness calls for documentation of what was inspected. Museums too, need a specialist to assess compliance issues. To assess how accessible a facility truly is, I searched for a worksheet to facilitate data collection specific to the best practices of accommodation. I found two assessments, one listed in a 1998 American Association of Museums (AAM) publication called *Everyone's Welcome*, identifying the "Facility Checklist" found in the ADA Title II Action Guide for State and Local Governments, and another checklist in the publication, the Uniform Federal Accessibility Standards. Both of these checklists related to architectural concepts are consistent with the ABA of 1968. Neither of the two surveys relates to disability specific or museum inclusive design problems. I was hoping to locate one checklist with all these features included. *Everyone's Welcome* further states, "No compliance form exists to provide museums with a comprehensive checklist for all issues that must be considered in the process of conducting a self evaluation." *Everyone's Welcome* goes on to cite *Design for Accessibility: An Arts Administrator's Guide*, containing a checklist relating to employment issues, print

materials and barrier removal. I began to develop a checklist to assess the physical spaces and communication strategies of museums based on the most current resources available.

I furthered my investigation to understand how assistive technologies could provide more accessibility opportunities for patrons with disabling conditions. I approached two CWU staff members, which helped broaden my understanding of assistive technologies. I found more resources to answer my questions. Ian Campbell and Jerry Connelly are two consultants serving disability programs at Central Washington University. Jerry provided background materials on assistive technologies, and Ian answered my questions about digital applications. From these sources I began questioning the Internet again with phrases from the terms on my list and adding words like wayfinding, screen reader, text-to-voice, auxiliary aid, adaptive technologies, and voice-to-text. Applications available now on most smart phones and other personal digital devices were available then only as programs in desktop computers. In my first year of developing this project, my research was data collection. I informally asked questions of museum professionals while on academic fieldtrips like: "Where did you receive your training?"; "Have you ever heard the term accessibility?"; and "When you were training did your university offer training in accessibility?" Join me in exploring the answers to these questions and more.

A Legal Framework

As I reviewed laws governing accessibility and reasonable accommodation, I discovered how those laws applied to a larger public, not just school children. I then pursued the history of these laws and how they were brought about by litigation. I discovered the histories the disability rights movement for issues as independent living, the right to public transportation and everyone's right to an education. When I explored the ADA of 1990 I could then define why it applies to museums. Along with the ABA of 1968 and the RA of 1973, I set up my argument for a need for museums to assess their compliance with these laws, and I began looking into whether there had been litigation directed at museums having to do with accessibility. I queried the DOJ website and learned the US Congress had mandated DOJ to enforce these disability laws as Civil Rights laws in 1990. From DOJ's website I found the Civil Rights Division and accessed an index of all their settlement agreements since 2006. From this listing I found three settlements on museums for noncompliance. The most recent settlement included additional fines, setting precedents for future actions. I also found how to avoid all these costs by a preferred method called voluntary compliance.

I started collecting literature on accessibility, adaptive and assistive technologies during my time with Ian Campbell and Jerry Connelly. Over time I learned which accommodations were required by federal laws for which communities of persons with disabling conditions. Then a problem occurred, one of which I've found difficult to resolve. Consumer electronics have out-paced the

development of assistive technologies. I had collected several different sources of assistive technology information when parity was achieved through public engagement with universal design applications of personal digital devices. The information I had originally collected on all these assistive technologies represented analog applications. Printed materials from the vendors of these technologies did not list hyperlinks to their web sites. Obviously this was all outdated information and technology. Museums are caught in a large-scale technological transition from analog to digital technology, and their visitors may need some of both.

Having determined that museums are legally required to be accessible, I inquired into the current state of compliance in museum facilities. I identified a consortium in New York and a multi-site museum education study funded by the Institute of Museums and Library Services (IMLS). Most of the museums and cultural facilities were on the East coast and only represented a fraction of the museums that exist in America. I began corresponding with a co-chairperson for the Museum Access Consortium (MAC) of New York City about accessibility training, museum conferences, and trainings available through MAC's archive of webinars and podcasts. I discovered Art Beyond Sight, an organization of multi-disciplinary professionals dedicated to including the visually impaired in the "world's visual culture." From Art Beyond Sight I collected a synopsis of their twelve-museum study, and findings of a focus group involving forty individuals with vision impairments.

There are laws stipulating the requirements that museums be inclusive, and the need for compliance evaluation is beginning to be acknowledged by museum funding agencies. In my search for an assessment tool I found, for example, on the website for the National Endowment for the Arts (NEA), a brief questionnaire for individuals from museums and other cultural facilities to determine if they have addressed accessibility in their grant applications. NEA is a federal source of grant funding. The accessibility questions of this informal survey outline twenty-three of the basic concerns including a question I have not addressed: does the organization have “... a designated staff member who is responsible for overseeing accessibility and Section 504/ADA compliance?”

I followed recent litigation of museums with regard to accessibility complaints, and saw that these sometimes resulted in stiff fines and specific timetables to comply with the settlement agreement. These precedents make timely compliance with accessibility laws a necessity for museums. I continue to follow these legal developments through the DOJ. The settlements however, did more than address the accommodation issues, they went further and addressed problems defined by the ABA.

I studied the *Americans With Disabilities Act of 2010, Standards of Accessibility* and the ABA regarding accommodations and decided to develop an assessment resource in order to evaluate how accessible a museum facility is and to be able to identify problems in serving the needs of persons with disabling conditions.

The Design:

Five documents on accessible design were reviewed including the NEA's Design for Accessibility, Smithsonian's Guidelines for Accessible Design, ADA, ABA and the AAM's Everyone's Welcome 1998. The AAM document is perhaps the one most familiar to museum professionals. John Salmen co-authored the National Endowment for the Arts publication, which was used to develop my assessment checklist.

The assessment tool developed on the basis of my research combines the requirements for accessible design found in the following documents:

1. Smithsonian Accessibility Program, *Smithsonian Guidelines for Accessible Design*, 1996
2. American Association of Museums, *Everyone's Welcome The Americans with Disabilities Act and Museums*, 1998
3. National Endowment for the Arts, *Design for Accessibility, A Cultural Administrator's Handbook*, 2003
4. Americans With Disabilities Act, *Standards of Accessibility*, 2010
5. Architectural Barriers Act, *Accessibility Guidelines*, 2010

These five sources provide the specific requirements museums should have to comply with the ADA and ABA. For example, the distance between exhibits, the

type and placement of carpets, and the use of Braille and large print in exhibits demonstrate the breadth of the requirements.

I chose these five sources for the following reasons.

- The Americans With Disabilities Act, *Standards of Accessibility* are the current federally mandated requirements for providing accommodation for individuals with disabling conditions.
- The Architectural Barriers Act, *Accessibility Guidelines* identifies physical problems that deny accessibility to a patron visiting a museum, art gallery or other cultural institution. Had I focused only on accommodation issues and not physical barriers, a museum could still be litigated, and deemed inaccessible. Physical barriers include the width of doorways, the inclination of ramps, the use of handrails, and the path of travel while viewing an exhibition.
- The National Endowment for the Arts, *Design for Accessibility*, was one of only two guides that include the enforcement of compliance issues with the ADA, and outlines penalties for noncompliance. I am using, with permission, their graphic representations to illustrate problems and solutions as presented in the ABA. Additionally the NEA has a good summary of the laws affecting disability compliance.
- Smithsonian Accessibility Program, *Smithsonian Guidelines for Accessible Design* was chosen for their complete treatment on exhibition and display font and text benefitting both individuals with low vision and persons with

cognitively challenging impairments. The Smithsonian offered a good piece of advice: every display should include tactile components. I have included the Smithsonian as museum professionals consider them as the benchmark of American museum culture.

- American Association of Museums, *Everyone's Welcome, The Americans with Disabilities Act and Museums* is outdated but still useful. It was developed with the assistance of the U.S. Department of Justice for the American Association of Museums. The writing is most informative and even though many of the original concepts on disability signage and historic preservation have been changed by revision of the ADA 2010, several of the recommendations presented are still valid. This is a good beginning in the study of these federal laws. The section on the ADA Standards of Accessibility is still accurate. This was the first writing to mention terms like "wayfinding," and "inclusion," and offers recommendations for voluntary compliance with the ADA. This is also the first writing to present the idea of enforcement by the DOJ for noncompliance.

This is a working document, a tool for determining compliance needs of museums and other cultural institutions. The current assessment checklist is the third draft.

Implementation:

I employed the following procedure for assessing accessibility at museums, and used this procedure at four local museums. I begin by touring each museum. This is a self-guided tour to evaluate barriers to mobility, visual problems, wayfinding, lighting, the height of exhibit text panels, and the presence of seating to accommodate patrons with stamina issues. For example: Does exhibit lighting cast a glare on the surface of a glass display? Are stairs and cases marked in a way to prevent a patron with visual impairment from falling? Is Braille used in any of the exhibits? Are there tactile displays? Is there another access if an elevator is not present to accommodate someone with mobility issues? I measure the height of display cases, the location of exhibit text, the width of ramps, landings, and doors. Do they have accessible signage? Are printed materials available to explain the fragile materials in closed cases? Are emergency exits marked? Upon completion of these assessments, museums receive a written report identifying any problems located and recommendations for solving these issues.

Another issue addressed is hospitality. How have staff been trained? How friendly is the receptionist? Do security personnel blend in with their surroundings or add to an inaccessible, imposing atmosphere?

For each museum, I began the actual survey process for testing the assessment checklist at the parking lot or city sidewalk and travel the path visitors to the museum must take. I measured and recorded on the assessment checklist the widths of parking spaces, the steepness of ramps, the widths of doors, and the

presence of hazards that may cause a person an injury from falling while visiting the museum. I measured ramps, stairways, elevators, and restrooms and many other features to discover barriers to accessibility for persons with such disabling conditions as mobility, strength and stamina, low vision, hearing loss, and other age related conditions.

The assessment checklist has undergone three revisions. The first draft began as a walk through of the Kittitas County Historical Museum, a local history museum with two full-time staff and 9,000 square feet of exhibit space. The areas recorded in the assessment checklist began in the parking lot and included ramps, curb ramps, cracks in the pavement, objects that may cause a person to trip.

This first draft had spaces to record the measured height or length of an object but lacked the required measurement cited in the ADA or the ABA. This worked in the field but was difficult for the report writing, always having to look up the required measurement made the process difficult to use.

The second draft had the required measurements but we had decided to organize these objects to be measured by the disabilities. This draft proved difficult to use in measuring the features of Yakima Valley Museum, a larger community museum of 65,000 square feet with over 5,000 square feet of space dedicated for exhibits that change. This assessment checklist required too many sheets of paper and interrupted the flow of the process.

The Yakama Nation Museum, at 1,200 square feet of exhibition space, was an easier assessment by not having multiple floors but again proved this draft difficult to work with.

The third draft incorporated the best of the previous drafts beginning as a walk through from the parking lot and listing the required measurements and providing extra space for notes on location of objects with in the museum.

There are four case studies: the Yakama Nation Museum and Cultural Center, Yakima Valley Museum, Kittitas County Historical Museum, and Gallery One.

The Yakima Valley Museum is located in the city of Yakima, Washington. I met with Andy Granitto, the Exhibits Curator, on the morning of November 22, 2013 and we began to tour the exhibits and the facility. This museum has three concessions: an ice cream fountain, a bookstore, and a large room that can be rented out for events. I explained my concerns and recommendations.

Later that same day I traveled to the Yakama Nation Museum and Cultural Center is located on the Yakama Indian Reservation in the city of Toppenish, Washington. I met with their Manager and Curator, Pamela Fabela. As we toured the museum I explained my concerns and recommendations.

The Kittitas County Historical Museum located in Ellensburg, Washington is a good example of a small museum in a historical building. I met their director, Sadie Thayer, on several academic field trips and worked there as a volunteer. The staff is made up of volunteers and board members. The collection reflects the contributions

of the descendants of pioneering farm families, and as with many museums, is a constant work in progress.

Gallery One is a small art gallery located in Ellensburg, Washington. I visited Renee Adams, their Arts Programmer, on September 14, 2013 and inquired about their interest in allowing me to assess their facility. Gallery One has multiple levels, offers classes to children and adults, maintains a gift shop and has 5,000 square feet of exhibit space.

An Active Process of Change

During the length of time I conducted this research the ADA was updated; new assistive technology and applications become available almost daily. Keeping current on both laws and ways to comply with these laws to build an inclusive community necessitate constant research and communication.

Together with these four case studies I draw from the example of the Museum Access Consortium (MAC), a volunteer organization committed to accessibility issues. Located in New York City. MAC has been actively pursuing the ideal of the inclusive museum since the mid 1990's. I have been corresponding with Danielle Linzer, the co-chair of the steering committee. Danielle consented to be interviewed, and has provided me with resources on accessibility. This consortium presents an example, which we should all aspire to emulate, thus I will use my research with MAC to develop recommendations for other American museums.

One simple question has led me through a discovery of words and terms that made it possible for comprehensive research using the library, internet and

government web sites like Disability.Gov, DOJ.Gov, Digital.Gov and the US Department of Education, Rehabilitation Services Administration (RSA) training site. From these web sites I was able to track how accommodations were being discussed by a broader community of individuals involved in compliance enforcement, disability programming and accommodation training. I began to understand a broader community was still at work. Persons with disabling conditions were being referred to as stakeholders instead of consumers or clients. Terms such as accessibility were being replaced with ones like inclusion, then inclusive design, and now inclusive community. A much larger focus is taking place nationally to accommodate individuals with disabilities. The concept of inclusive community embraces all businesses in a city. All places of “public accommodation” as outlined by title 3 of the ADA.

Museum professionals need to understand the importance of these laws especially as museums have been listed in the ADA since 1990 as having to accommodate persons with disabilities.

People with disabilities have the same interests and desires as anyone else. The “pursuit of happiness” for individuals with mobility challenges has obstacles able-bodied persons never think about. Attending the theater, going to museums and browsing art galleries, these are all activities of both education and entertainment that everyone should be able to enjoy. Historically museums have led the way in education by offering a wide range of informative tours and lectures to an ever-increasing number of people. Today museums are considered stewards of

all things American to all Americans, (Schwarzer, M., 2006 p. 27). It is time that all Americans regardless of ability can truly be a part of the museum culture of “All things American to *all* Americans.”

The next chapter explores the history of museums and their evolution as a cultural institution. In addition I consider how museums and art galleries became community focused and part of the community they live in, and the new idea to become part of an inclusive community.

CHAPTER III

LITTERATURE REVIEW: COLLECTIONS AND A GOOD STORY

Origins of Museums

Today's museums are about education and community engagement. They use artifacts and interpretive presentations to convey a sense of place and a linkage with historical events, but it was not always so. The royalty of Russia, England, and Europe used their vast collections for entertainment. These collections expressed opulence (Gombrich, 1988; Duncan, 1995). In the 16th and 17th centuries, gentlemen of the nobility often collected mineral specimens, taxidermy, old weapons, and unusual objects while traveling (Burcaw, 1983; Greenblatt, 1991). No adventure was complete without collecting personal treasure. Such collections were often displayed at one's home. The treasure room was called a cabinet of curiosity (Impey et al., 1985; Burcaw, 1983; Gombrich, 1988; Greenblatt, 1991).

By most accounts museums came about through such collecting. As private European collectors eventually outgrew these special display rooms, several collections became museums, held by colleges or societies of gentlemen interested in the preservation of their objects. Many contemporary museums began as assemblages of private collections. Among these museums are the British Museum in London (the vast personal collection of Sir Hans Sloane, 1753), Grünes Gewölbe (Augustus the Strong, 1723) in Dresden, Pitt Rivers Museum (General Pitt-Rivers, 1884) in Oxford, and the Kunstkamera (Peter the Great 1718) in St. Petersburg, Russia, (Burcaw, 1983; Alexander, E.P., 1995).

Founding of American Museums

As in England and Europe, American museums were formed from donated collections. In 1773, in the midst of the war for American independence, the Charleston Library Society gathered samples of animals, plants and minerals from the South Carolina low country. This collection formed the first American museum, (Alexander, 1979). In 1786 artist Charles Wilson Peale opened his Philadelphia home as an American cabinet of curiosities. This display is regarded as the nation's first museum open to the public, (Alexander, 1979; Weil, 1999). Part of the Peale family's collection was later purchased and displayed by P.T. Barnum to add to his collection of taxidermy and oddities, which included a "genuine mermaid skeleton," for Barnum's American Museum in New York, (www.lostmuseum.cuny.edu/archives/museum.htm)

The traditions and history of America's museums reflect the history of our society. In the beginning museums in many ways retained the exclusivity characteristic of private collections and defined the essence of a classist society (Dana, 1917). Admission to these collections was restricted for the most part to scholarly research. Today museums in the U.S., are considered stewards of all things American to all Americans, (Burcaw, 1983; Schwarzer, M., 2006).

Initially, museums in the United States were developed to provide evidence that America was a civilized place. Early museums looked to Europe as the model. In the late 1800's, a museum's primary focus was to teach the working class about culture (Weil, 1983). With a growing, working poor, immigrant population, the

extremely wealthy defined what was to be valued in public education, what it was to be a citizen and endorsed the “Great Melting Pot” ideology of early America. Their mission was to become the beacon of values and correctness of their city or country (Burcaw, 1983).

Founders of early public museums, such as the American Museum of Natural History, in New York, and the Smithsonian Institution in Washington D.C., sought to promote through education a more productive, prosperous nation (Alexander, 1979). In the 1880’s museums began to offer public lectures on diverse topics, (Burcaw, 1983). It was hoped these opportunities would foster a strong relationship with teachers and schools, leading classes of children to expand their limited educational opportunities by visiting the museums. This inspired a change in the way children were educated. John Dewey, in 1896, started the Lab School, the first school in Chicago to incorporate museum visits as part of its weekly curriculum as well as hands-on learning, resulting in the development of children’s museums, (Ames, 1986; Mayhew, Edwards, 1936).

Private museums developed by wealthy industrialists began their own mission of education and preservation (Conn, 1998). These museums continued the tradition of displaying the status and wealth of their patrons. Art, sculpture and collections that showed off science and anthropology had specific aims of showing both material and intellectual progress in a growing nation, (Burcaw, 1983; Duncan, 1995). The imposing architecture of these museums intimidated the average working class person (Duncan, 1995). Persons of color were either barred

from entering or were allowed to visit only on specific days and times. Directors were upset at anyone touching objects, making noise, spitting or other common displays of behavior tabooed in the upper class. A museum visit was to be a learning experience, similar to going to church, and behavior was to be clean, polite, and respectful. The message was, “keep your hands to yourself,” (Ames, 1986; Duncan, 1995).

Compared to their European contemporaries of the time, museum collections in the early 1900’s in America had a severe lack of depth and quality. Their main emphasis was education, (Weil, S. F., 1999). For example, the term “docent” was coined at this time as a description of a person who explained art to visitors at exhibits. (Weil, 1999). This devotion to education was even used as a means to teach the public about Tuberculosis during a 1908-1909 epidemic of the disease. Museums produced pamphlets and exhibits in many different languages for public health education, (Schwarzer, M., 2006). By 1915 educational departments were emerging at various institutions, and for the first time ever museums offered programs for the deaf using a type of projector called the Magic Lantern, their first accommodation for people with disabilities.

The World War Years

While the international community was recovering from the aftermath of the First World War, art galleries and museums began to shift away from education and towards preserving culture (Schwarzer, 2006). Americans rushed to Europe to buy up masterworks from the economically devastated governments of a war-ravaged

continent (Greenblatt, 1991; Schwarzer, M., 2006). Some directors of museums, like Newark Museum Director John Cotton Dana, resisted this Euro-art movement and kept to everyday items and dioramas (Anderson, 2004). By the 1920's the turn to European fine art was in full swing. Curators were trained to follow a high society vision of art display as a show of wealth and power. With this grand vision came even grander buildings to house elite collections. Americans began to realize that museums need not be tools only for carrying on the traditions of Europe. They could be symbols of an emerging American sophistication. (Duncan, 1995)

The great boom of grand, imposing museums came to an end during the onset of the Great Depression in the late 1920's. Buildings became more neutral and approachable for the common people and returned to a focus on education. Schools, suffering a severe lack of funding, returned to museums in great numbers. Charitable foundations supported this progressive educational value (Hein, 2006).

President Franklin Delano Roosevelt left an indelible mark on the history of American society when he embraced museums as an integral part of democracy. His "Work Progress Administration" (WPA) built 53 new art centers, then offered WPA sponsored classes as a way of both employing teachers and educating school children in art, thus expanding the audience for museums. (www.fdrlibrary.org).

According to Marjorie Schwarzer, in *100 Years in Museum History*, patriotism and politics at the beginning of the Second World War grew inside of the museum structure. Programs encouraged military recruitment and supported national security. Museums offered classes covering such topics as how to prepare meals

within the limitations of rationing. Traveling exhibits were produced by some museums to help educate people about how to tell enemy troops from friendly troops or how to identify Japanese aircraft. The buildings became hospitals, research facilities, and schools, and hosted international delegations at the close of the war. (Schwarzer, 2006)

The Cold War

Post-war, museum visits skyrocketed (Zolberg, 1994). The prosperity that followed those years led to interest in education and culture never seen before. Immigrants and refugees from war-shattered Europe were allowed into the United States, creating a boom in the middle class. (www.uscis.gov)

The Nation Council for American Education, an enthusiastic supporter of McCarthyism, brought much progressive education to a halt. They believed that progressive education was too pragmatic with its “learn by doing” philosophy and was not enough about facts or information. Education was to teach basic skills only, no frills, and with no federal government money. The era was focused on promoting American values of self-discipline, democracy and self-reliance (Atwell, 2003). The Federal Civil Defense Agency, promoting education as the first line of defense, had traveling displays and exhibits aimed at demonstrating to Americans the wisdom of preparing for an atomic attack. The “Duck and Cover” and other early cold war campaigns were brought to every state, and promoted in every school, library and museum (www.coldwar.com)

The Soviet Union’s launch of the satellite Sputnik tapped into fears of Soviet

domination and heightened competition for more knowledge. Higher achievements in science were nationalized as a way to make the nation secure. This 1960's event brought back federal support for museums. Learning by doing was back and science was the focus. Classes of school children flocked into newly refocused science centers and innovative children's museums. (Hein, 2006)

The Social Revolution, Civil Rights and New Tourism

During the social upheaval of the 1960's Civil Rights movement there was a slow effort to begin to broaden community outreach. Yet the Metropolitan Museum's 1969 exhibition, "Harlem on My Mind: The Cultural Capital of Black America," was an under-informed, ill-conceived exhibit that excluded the very artists and artwork of the people who, according to the title, were supposedly speaking for themselves. A better example of outreach is the Smithsonian's opening of the Anacostia Neighborhood Museum in Washington D.C. in 1967 (Weil, 1999). This museum centers on African-American community life and offers programs, research and collections that reflect that mission (Kinard, as quoted by Weil, 1999).

Gradually, community activists, in response to under representation in politics and media, formed their own museums for their neighborhoods to demonstrate ethnic civic pride (Archibald, 2004). Seattle's Wing Luke Museum of the Asian-Pacific American Experience (established 1966) is one such institution. Federal grants for "outreach projects" went to hospitals, prisons, shopping malls, local festivals, and senior centers. This federal money also funded insurance indemnity programs so that valuable collections could be insured, reducing the

liability of displaying priceless objects in exhibitions to the public (Schwarzer, 2006).

The 1970's saw a further increase in visits to museums and the beginnings of cultural tourism. During this time the National Endowment for the Arts (NEA), the National Endowment for the Humanities (NEH), and the Institute of Museum and Library Services (IMLS) were created by the federal government by the passage of the Museum Services Act of 1976 (Weil, 1983). The increase of federal support for museums inspired artists, teachers, and activists to start museums (Schwarzer, 2006).

On into the 1980's there was a building boom, linked to urban renewal and educational grants. Yet this decade saw cutbacks in federal funding (Weil, 1999). Shortfalls in funds meant finding new ways to pay the bills. Besides approaching their own members for more money, a new way of fundraising had to be incorporated into the "business" of museums. The new strategy that emerged to help museums survive involves the adoption of revenue generating services based on increasing patron visits, encouraging new patrons to visit and expenditures such as theaters, merchandising and bigger and better exhibits (Weil, 1999; Ashley, as quoted by Archibald, 2004).

A New Millennium Approaches

The 1990's began an era of change. The Cold War was winding down and new laws entered into play. With renewed attention to "audience," museums began focusing on their interior spaces to improve accessibility under the ADA. This

attention to compliance led to redesigning and remodeling for people with disabling conditions (Weil, 1999).

There was an attempt to reach new audiences with technology. The number of museum visits increased and museums began doing better with less federal funding. Museums endeavored to be more things to more people, (Weil, 1999). Access to collections was expanded through the use of technology such as audio tours, and computer websites.

Museums were seen as a way to increase tourism dollars in local economies, so more were built. As resources for school children, repositories of artifacts, preservers of culture as well as promoters of new ideas, museums have emerged from the elite enclaves of the privileged and have become a new town square, a place where all are welcome, (Weil, 1999; Ambrose, et al., 2002)

In the next chapter we visit the history of the disability rights movement. Though not directly related to compliance issues for museums these events demonstrate how long people have advocated for the ability to enjoy the enrichment of life we all seek. Some people have come farther in this journey than could ever have been imagined 50 years ago. As we live to older ages, health conditions may decline and mobility may become a challenge. A few decades ago seniors were not as active as many are now. Even the younger, gravely disabled can be seen taking in the sights at public events. This new, larger audience that requires accommodations is not to be denied access to the fullness of cultural experience that museums offer.

CHAPTER IV

HISTORY OF DISABILITIES: AGENTS OF CHANGE

The right of choice concerning the right to independent housing, the right to work, the right to enjoy the same pursuits and recreations as other Americans are protected under the Americans with Disabilities Act Title I, Employment and Titles II and III, Accommodation. This history is about the quality of life for everyone being protected one litigation at a time. “The ADA is the culmination of a series of important legislative steps that have been taken to ensure that people with disabilities have the same opportunities available to other citizens...” (Salmen, 1998)

The court decisions and legislation that set precedents for the development of inclusive design are about accommodations in independent living, education, transportation, employment, and recreation. American society of the late 1900's had imprisoned many individuals with disabilities, and others who were considered undesirable, in institutions. Changes over time, brought about by community activists and advocacy groups, released these citizens into public life. People were granted the right to live independently of institutions, have homes of their own, be educated, travel on public conveyances, and participate in the recreations we all enjoy.

The idea of people with disabilities visiting museums has developed slowly over the last 40 years. Prior to the Rehabilitation Act of 1973 and the Americans

with Disabilities Act (ADA) of 1990 it was uncommon for disabled people to be involved in society. Prejudice and social and physical barriers kept this population out of mainstream America. I include the history of the disability rights movement to illustrate several issues. First, when developing guidelines for museums and other cultural facilities, authors have mostly focused on people with visual impairments. This is for the most part due to the National Federation of the Blind as an advocacy organization. Since the enactment of the ADA in 1990, this group has litigated more often against inaccessible technologies and facilities than other advocacy group as is evident by my searches for these kinds of cases on the DOJ website. Second, I have included this history to provide a sense of how seriously these federally mandated laws are enforced. Third, as more and more people are out of the home or institution and included in the ADA's definition of disabled, they will be participating in all aspects of society, including as museum patrons. Museums need to focus on including everyone regardless of their perceived abilities.

The IMLS states on their website that there are 35,000 museums in America, of which only 1,033 are accredited. The law covers these places and many retail outlets under the language of "places of collection and display" listed in the ADA, Title III, Public Accommodations, number eight on a list of twelve of places identified as having to be compliant with this law. Perhaps because museum administrators do not realize this law applies to their facility or because they do not have the funding to make needed changes, few museums are compliant with these federal responsibilities. As mentioned earlier this has been an unfunded federal

requirement with very little financial support. The truth of the matter is that over the past decade there have been several major lawsuits filed against museums due to discrimination on the basis of non-compliance with the Americans with Disabilities Act of 1990. Watchdog groups as well as federal and state organizations have come on board and are looking for non-compliance. In order to understand where we are now, let us take a look at the disability rights movement that culminated in these Civil Rights laws. Initiatives in several sectors have come together to effect significant change.

The Disabilities Rights Movement Begins

Like other social movements in America, the disability rights movement began as a “grassroots” project. The catalyst for rehabilitation after a traumatic setback was returning veterans of World War I who wanted to return to civilian opportunities and lifestyle. The next big surge came with the returning veterans of World War II. Other veterans of the unpopular Korean and Vietnam conflicts also sought to return to the lives they lived before they went into battle. Advocates for support and accommodations adopted new tactics in the 1960’s as advocacy groups networked with each other to sponsor events, such as social disobediences, non-violent public gatherings, and “sit-ins.” The 1960’s also began another trend-- litigation, which resulted in federal court decisions. These processes are still in use.

Learned prejudices persist across time, finding fresh audiences in every era. Recorded history shows, from as early as the writings of Greek philosophers such as Aristotle, that those who were “deformed” were less than human. A perceptible

disability in one functioning area was taken for a sign of deficits in other areas such as intelligence or character. In ancient Rome, the wealthy would keep a person with a physical or mental disability as a “fool” or “court jester” for entertainment. The advent of Christianity tempered brutal attitudes toward the disabled somewhat, and helping “the afflicted” became a sign of strength. Even so, such people were often chased out of town or physically removed to less visible locations. Asylums, sanitariums and orphanages were established to house and care for physically and/or mentally disadvantaged people. Over time these institutions continued their mission, but with little regard for educating their charges.

Before 1817, as far as I could document, there was little hope for any person with a disability to live a life equal to those around him or her. The first school for the deaf, the American School for the Deaf, was opened in Hartford Connecticut in 1817. Later, in 1864 the Columbia Institution for the Deaf and Dumb and Blind was authorized by the U.S. Congress to grant college degrees. This was the first college worldwide established for people with disabilities.

Late-nineteenth Century publications on Eugenics created a national hysteria which affected every individual not born to white, privileged society. In 1883, Sir Francis Galton, cousin to Charles Darwin, published Essays on Eugenics. In an America demographically reeling from immigration upheaval and torn by post-Reconstruction chaos, race conflict was everywhere. Laws from this era lead to the mass institutionalization and sterilization of poor and disabled adults and children. In Europe as well as the United States, institutions that had been established to

benefit and educate disabled persons in the 1840's and later, all suffered the same issues of too many wards and not enough staff. Residents of these places were nearly always neglected and abused by understaffing, if not outright negative attitudes among administrators and staff.

Civil Rights as a Catalyst

Initially about race, the 1954 landmark case of U.S. Supreme Court in *Brown v. Board of Education of Topeka* ruled that separate schools for black and white children are unequal and unconstitutional. Its outcomes were nevertheless far-reaching as eventually the Civil Rights Movement came under this umbrella. Also in 1954 Vocational Rehabilitation Amendments were passed that authorized federal grants to expand programs available to people with disabilities. Ten years after *Brown v. Board of Education of Topeka* President Johnson enacted the Civil Rights Act, prohibiting discrimination on the basis of race, religion, ethnicity, national origin and creed. This Act established a precedent for public accommodation and employment of persons with disabilities.

Physical Disabilities

As veterans returned from World War I society's view of the disabled began to change: a disability was something that could be fixed so the ailing person could return to society. In 1918 the Smith-Sears Veterans Rehabilitation Act provided vocational rehabilitation opportunities for persons discharged from the U.S. military. The Social Security Act, passed in 1935, extended benefits and funds to states for assistance to blind individuals and disabled children. Social Security

Amendments of 1956 created the Social Security Disability Insurance (SSDI) program for disabled workers.

In the 1940's, advocate groups had begun to form and lobbied for change in laws to make life better for people with disabilities. The National Federation of the Blind was formed in 1940 by Jacobus Broek. They advocated for white cane laws, for programs for blind clients and other reforms. Another advocacy group, the American Federation of the Physically Handicapped also formed that year. This was the first cross-disability national political organization to call for an end to employment discrimination, lobby for the passage of legislation, and champion the National Employ the Physically Handicapped Week and other initiatives.

In 1945, President Harry Truman signed PL-176 creating an annual "National Employ the Handicapped Week." Under President Dwight D. Eisenhower in 1952 the National Employ the Handicapped Week became the "President's Committee on Employment of the Physically Handicapped," a permanent organization reporting to the President and Congress.

Architecture for the Physically Disabled

In 1961 the American National Standard Institute, Inc. (ANSI) published American Standard Specifications for making buildings accessible to and usable by the physically handicapped. This landmark document became the basis for architectural access codes and later the Uniform Federal Accessibility Standard of 1984 and the American with Disabilities Act of 1990. The vocational rehabilitation Amendments of 1965 authorized federal funds for construction of rehabilitation

centers, expansion of existing vocational rehabilitation programs and the creation of the National Commission on Architectural Barriers to Rehabilitation of the Handicapped. Once the Architectural Barriers Act was passed in 1968 architectural barriers in all federally owned or leased buildings were prohibited. These Acts improved access for disabled people to all kinds of buildings and establishments.

More recently, in March of 2010, as part of new rules for the Americans with Disabilities Act, accessibility requirements expanded to include recreational facilities such as golf courses, exercise clubs and boating facilities. Even established and well-known facilities are affected by the enforcement of the ADA. A lawsuit in 2012 required the Lincoln Center for the Performing Arts in New York to add wheelchair seating and accessible parking and renovate restrooms to make them more accessible. To cover all bases, California enacted a civil code (California Civil Code Section 1938) in 2013 that requires “commercial property owners or lessor” to include on the lease whether the property has been inspected by a Certified Access Specialist (CAS) and if so whether the CAS did or did not determine whether the property met all applicable construction-related accessibility standards. This law demonstrated both public and private applications of the ADA and continual revisions of the law by both state and federal agencies..

The Reintegration of The Mentally Ill and Cognitively Challenged

President Kennedy, in a Special Message to the Congress on Mental Illness and Mental Retardation February 5, 1963, called for a reduction in the number of persons confined to residential institutions and asked that methods be found “to

retain in and return to the community the mentally ill and mentally retarded, and thereto restore and revitalize their lives through better health programs and strengthen educational and rehabilitation services.” This resulted in deinstitutionalization and increased community services. The Association of Persons with Severe Handicaps (TASH) was founded by special education professionals in response to *PARC v. Pennsylvania* (1972) and other right to education cases. This organization called for an end to aversive behavior modification and for closure of residential institutions for people with disabilities. TASH in the 21st century is an international organization that continues its mission to “promote the full inclusion and participation of children and adults with significant disabilities in every aspect of their community, and to eliminate social injustices that diminish human rights.”(TASH.org). The phrase “**...every aspect of their community...**” includes museums and galleries. In *New York ARC v. Rockefeller*, 1972, parents of residents at the Willow Brook State School in Staten Island, New York filed suit to end the appalling conditions at that institution. A television broadcast from the facility outraged the general public. Eventually thousands of people were moved into community based housing. This event increased the number of disabled persons seeking entry to public institutions such as libraries, colleges and museums. The U.S. Supreme Court ruled in *O’Connor v. Donaldson*, 1975, that people cannot be institutionalized in a psychiatric hospital against their will unless it is determined that they are a threat to themselves or to others. This decision left more mentally disabled individuals free to interact with

society which led to more action on behalf of this group. The U.S. Supreme Court ruling in *Addington v. Texas* raised the burden of proof required to commit persons for psychiatric treatment from the usual civil burden of proof of “preponderance of the evidence” to the higher standard of “clear and convincing evidence.” This enabled more mildly mentally ill people to stay in their own homes and communities.

Housing

People who are disabled or cognitively impaired now have opportunity to access culture and participate fully in their communities and in the world at large because they are no longer held in locked institutional facilities. Independent living improves the quality of their lives, and helps them gain skills crucial to their education, daily living and employment opportunities. More individuals living in the community has meant a need for more public accommodations for the disabled. Eventually thousands of people were moved into community based housing.

Title VII of the Rehabilitation Act Amendments of 1978 established the first federal funding for consumer-controlled independent living centers and created the National Council of the Handicapped under the U.S. Department of Education.

The (American) Fair Housing Act was amended to protect people with disabilities from housing discrimination in the areas of rentals, sales, and financing, as outlined in the Civil Rights Act of 1968. In 1979, *Southeastern Community College v. Davis*, the U.S. Supreme Court ruled that under Section 504 of the Rehabilitation Act of 1973, programs receiving federal funds must make “reasonable

modifications” to enable the participation of otherwise qualified disabled individuals. This decision was the Court’s first ruling on Section 504 establishing reasonable modification as an important principle in disability rights law, setting a precedent for ADA Title III, Public Accommodation.

Transportation Access for All

Paralyzed Veterans of America, National Paraplegia Foundation and Richard Hedding filed suit against the Washington Metropolitan Area Transit Authority in 1973 to incorporate accessibility into their design for a new multibillion dollar subway system in Washington D.C. Their victory was a landmark in the struggle for accessible mass transit. Non-compliance with the court order required repeated litigation against the Washington Metropolitan Area Transit Authority. This lawsuit and many other similar cases against public transportation continue to effect current legislation at both the national and state levels.

Education for All

Museums are an integral part of education. Some museums host field trips from K-12 public schools, others build and deliver traveling exhibits to schools and other museums. The following stories illustrate a transition to inclusion of children from under-served populations, children with disabilities.

1971 and ‘72 saw litigation favorable to children with disabilities. The U.S. District Court, District of Columbia ruled in *Millis v. Board of Education* that the District of Columbia could not exclude disabled children from the public schools. The U.S. District Court, Eastern District of Pennsylvania, in *PARC v. Pennsylvania*

struck down various state laws used to exclude disabled children from attending public schools. Advocates cited these decisions during public hearings that led to the passage of PL 94-142, the Education for All Handicapped Children Act of 1975. This Act was later named the Individuals With Disabilities Education Act (IDEA) in 1990, which includes a permanently authorized grant program that provides federal funding to the states; all states that receive these federal funds are required to provide a “free, appropriate public education” to all children with disabilities in the “least restrictive environment.”

The Developmental Disability Bill of Rights (1975) established protection and advocacy services. Also that year, the Community Services Act created the Head Start Program to serve the “preschool children of low-income families with a comprehensive program to meet their emotional, social, health, nutritional and psychological needs.” This program was designed to help break the cycle of poverty in this disadvantaged socioeconomic group. Head Start Program continues to serve this needy population in the twenty-first century.

In *Greer v. Rome City School District* the U.S. Eleventh Circuit Court stated, “Before the school district may conclude that a handicapped child should be educated outside of the regular classroom it must consider whether supplemental aids and services would permit satisfactory education in classroom.” The court also said that the district cannot refuse to serve a child because of added cost, and that school officials must share placement considerations with the child’s parents at the Individualized Education Plan (IEP) meeting before a placement is determined.

A New York court found in the case of *Mavis v Sobol* (1993) that school efforts for placement of a student in a regular classroom were inadequate because the school had not provided a behavior management plan or staff training to help modify the regular curriculum to meet the student's needs. By 2009 IDEA had grown to encompass a U.S. Supreme Court ruling in *Forest Grove v. T.A.* that favored the parents of a child with a disability that had not attended public school. The court held that even though their son had never received special education services from the school district they were entitled to pursue tuition reimbursement for the private educational program they secured for their son. Home and private schooling programs use museums as part of the curriculum.

Placement of children with disabilities in mainstream schools continued to invite litigation. In *Honig v. Doe*, the U.S. Supreme Court affirmed the stay-put rule established under the Education for All Handicapped Children Act of 1975. School authorities cannot expel or suspend or otherwise move disabled children from the setting agreed upon in the child's Individualized (IEP) without a due process hearing. In *Daniel R. R. v. State Board of Education*, The U.S. Fifth Circuit Court of Appeals ruled in 1989 that regular education placement is appropriate if a child with a disability can receive a satisfactory education, even if it is not the best academic setting for the child; non-academic benefits must also be considered. The Court stated, "Academic achievement is not the only purpose of mainstreaming. Integrating a handicapped child into a non-handicapped environment may be beneficial in and of itself...even if the child cannot flourish academically." The Circuit

Court developed a two-pronged test to determine if the district's actions were in compliance with the IDEA: 1) Can education in the regular classroom with the use of supplemental aids and services be achieved satisfactorily? If it cannot, has the school mainstreamed the child to the maximum extent appropriate?

In *Holland v. Sacramento City Unified School District*, the U.S. Ninth Circuit Court affirmed the right of disabled children to attend public school classes with non-disabled children. This and other similar cases in the late 20th century fully integrated special needs children into general education classes at schools. A federal judge who decided one of the cases endorsed full inclusion, writing, "Inclusion is a right, not a privilege for a select few." (*Oberti v. Board of Education of the Borough of Clementon School District* 1993). Now even the most severely disabled child is included in a truly integrated school system. These children are a part of the 21st century student body that regularly visit museums as part of their school's curriculum. Museums must be inclusive for this audience to achieve their full educational classroom goal.

Employment

In 1986, the Employment Opportunities for Disabled Americans Act was passed, allowing recipients of Supplemental Security Income and Social Security Disability Insurance to retain benefits, particularly medical coverage, after they obtain work. A disabled person's right to work was greatly improved over the previous legislation in 1999 with the *Carolyn C. Cleveland v. Policy Management Systems Corporation* U.S. Supreme Court decision that people receiving Social

Security disability benefits are protected against discrimination under the American with Disabilities Act if and when they are able to return to work. Also that year the Work Incentive Improvement Act (Ticket to Work) became law allowing those who require healthcare benefits to work.

General Disability Rights Progress

The Rehabilitation Act (RA) of 1973 was passed. Sections 501, 503, and 504 prohibited discrimination in federal programs and services and all other programs or services receiving federal funds. Key language in the Rehabilitation Act, found in Section 504, states “No otherwise qualified handicapped individual in the United States, shall, solely, by reason of his handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

In 1977, Joseph Califano, U.S. Secretary of Health, Education and Welfare, refused to sign meaningful regulations for Section 504, which prohibits discrimination on the basis of disability and requires federal agencies and any organization that receives federal funding to make its programs and activities accessible to people with disabilities. After an ultimatum and deadline, demonstrations took place in ten U.S. cities in April. The sit-ins at the San Francisco Office of the U.S. Department of Health, Education and Welfare lasted until May. More than 150 demonstrators refused to disband. This action became the longest sit-in at a federal building to date. In another significant event later, in 1979, the Disability Rights and Education Fund (DREDF) was established in Berkeley,

California. It became America's leading disability rights advocacy center. DREDF participated in landmark litigation and lobbying of the 1980's and 1990's.

For those individuals with disabilities wanting to immigrate to the United States the paper Handicapping America (Bowe F, 1978), was a comprehensive review of the policies and attitudes denying equal citizenship to people with disabilities. It became a standard text of the general disability rights movement

The RA Amendments of 1986 defined supported employment as a "legitimate rehabilitation outcome." 1988 was a busy year in which The Civil Rights Restoration Act counteracted bad case law by clarifying Congress's original intention. Under the Restoration Act, discrimination in any program or service that receives federal funding is illegal. Also in that year, "A Deaf President Now" student demonstration was held at Gallaudet University in Washington D.C. On March 13, Dr. I. King Jordan was named the first deaf president of the university. The disabled becoming leaders in the community was a trend that had just begun.

Ultimately, section 504 regulations were issued, clarifying that each Federal agency has its own set of section 504 regulations that apply to its own programs. Agencies that provide Federal financial assistance also have section 504 regulations covering entities that receive Federal aid.

The Legal Services Corporation Act Amendments of 1974 added financially needy people with disabilities to the list of those eligible for publicly funded legal services. This includes litigation of facilities that are not accommodating individuals with disabilities. These amendments guarantee all court costs be paid by the

defendant, which has generated many civil litigations in the states of California, Florida, and New York, and continues to provide enforcement of accessibility one case at a time.

The original version of the Americans with Disabilities Act (ADA) was introduced in 1988 and was redrafted and reintroduced in Congress later. Disability organizations and activists across the country advocated on its behalf.

The ADA became law in 1990, providing comprehensive civil rights protection for people with disabilities. Closely modeled after the Civil Rights Act and Section 504 of the RA of 1973, the law was the most sweeping disability rights legislation in American history, mandating that local, state, and federal government programs be accessible; that employers with more than 15 employees make “reasonable accommodations” (Rehabilitation Act Amendments: Findings, p.1) for workers with disabilities; that they not discriminate against otherwise qualified workers with disabilities; and that public accommodations and commercial facilities make “reasonable modifications” to ensure access for disabled members of the public and not discriminate against them. The Act also mandated access in public transportation and communication. In 1992, Amendments to the RA of 1973 were infused with the philosophy of independent living.

In 2008 the ADA had significant amendments to broaden the scope of who is considered disabled under the law. Now disability is defined as having a condition that substantially limits a major life activity and/or bodily function. The disabling condition can even be of a periodic nature. The law also requires that people ignore

the beneficial effects of any mitigating measures (except ordinary eyeglasses and contact lenses) that the person uses.

The American Indian Disability Legislation Project of 1993 was established to collect data on Native American disability rights laws and rights. This project continues to promote methods of adopting disability legislation among tribes that respect tribal sovereignty and cultural diversity and yet are consistent with ADA principles

In 1993 Robert Williams was appointed Commissioner of the (American) Administration on Developmental Disabilities and went on to accept in 2012 the position of Acting Associate Commissioner for Employment Support Programs. Born with cerebral palsy, he continues to be a life-long leader in the disability rights movement. He was the first developmentally disabled person to be named the Commissioner, a notable event in the timeline of Disability Rights. Later he was appointed Associate Commissioner, Office of Employment Support Programs. The disabled continue to achieve community leadership positions.

Justin Dart and others in Washington, D.C, organized “Justice for All” in 1995 to advocate against calls to amend or repeal the Americans with Disabilities Act and the Individuals with Disabilities Education Act.

During this period the U.S. Congress passed the Congressional Accountability Act of 1995 requiring all offices in the legislative branch to make their public services, programs, activities and places of public accommodation accessible to members of the public who have disabilities. It was also declared that employees of

Congress cannot be discriminated against in personnel actions because of a disability.

In the final years of the twentieth century, President Clinton signed into law the 1998 amendments to the RA of 1973 involving Section 508. Section 508 “...requires access to the federal government’s electronic and information technology.” This law covers all types of electronic and information technology in the federal sector and is not limited to assistive technologies used by people with disabilities.

As the civil rights of the people with disabilities improved, they became more involved in society. The “pursuit of happiness” was applied to every individual, no matter what his or her personal obstacles were. Free to attend the theater, go to museums and browse art galleries, their presence became equal to any able bodied person. It is these places that must follow the hard won laws to ensure that anyone, no matter what disability, can fully enjoy the experiences offered.

The ADA as amended in 2010 protects our rights to affordable independent housing, public transportation, the right to gainful employment, the ability to enjoy recreational offerings, participate in higher education, and the right to be understood by others when speaking and understand others when spoken to.

The ADA, Title III defines places of public accommodation listing twelve types of enterprises. Number eight on the list are museums, galleries, and places of collection and display. The consequences of failure to provide accommodations for

persons with disabling conditions and how to go about improving accessibility are explained in detail in the following chapters.

CHAPTER V

LEGAL CASES

In this chapter I define how museums are liable under the law and present three settlement agreements between the United States Department of Justice (DOJ) and private museums. The first settlement, from 2008, is with the International Spy Museum located in Washington D.C. The second, from 2010, involves The Mount Vernon Ladies' Association of the Union (MVLA) located in Mount Vernon, Virginia, and third and most recent, in 2013, is the Newseum, Inc., located in Washington D.C. I begin the discussion by comparing complaints filed with the United States Department of Justice and similar infractions among these three museums. I then describe the compliance process developed and required by the United States Department of Justice.

The Legal Responsibilities of Museums

The museums were found to have responsibilities under three laws governing accessibility as outlined in the "Design for Accessibility: A Cultural Administrator's Handbook" of the National Endowment for the Arts, 2004.

Under the first of these laws, the Architectural Barriers Act of 1968, cultural organizations that use federal funds to design, construct or alter a building must comply with a minimum level of physical accessibility. The Architectural Barriers Act applies to, as quoted:

...buildings or facilities. . .

- 1) to be constructed or altered by, on behalf of, or for the use of the federal government;
- 2) to be leased in whole or in part by the United States. . .
- 3) to be financed in whole or in part by a grant or a loan made by the United States after August 12, 1968. If such building or facility is subject to standards for design, construction or alteration issued under authority or the law authorizing such grant or loan;
- 4) to be constructed under the authority of the National Capital Transportation Act of 1965, or Title III of the Washington Metropolitan Area Transit Regulation Compact.

Other buildings or facilities constructed by recipients of federal funds are subject to Section 504 of the Rehabilitation Act, which requires all new construction and alterations to be accessible.

The ADA and Its Titles

The Americans with Disabilities Act of 1990 (ADA) is a federal civil rights law that prohibits exclusion of people with disabilities from everyday activities, including leisure activities. It extends accessibility provisions to both private and public sectors. The ADA guarantees equal opportunity for individuals with disabilities in employment, public accommodations, transportation, state and local government services, and telecommunications by requiring businesses of all sizes that serve the public to remove existing barriers that are readily achievable, to

ensure accessibility in new and remodeled facilities, and to facilitate effective communication by providing auxiliary aids.

The ADA is divided into five sections called “Titles.”

- ADA Title I: Employment

Title I requires employers with 15 or more employees to provide qualified individuals with disabilities equal opportunity to benefit from the full range of employment-related opportunities available to others.

- ADA Title II: State and Local Government Activities

Title II requires state and local governments to give people with disabilities equal opportunity to benefit from facilities and programs, including museums operated by state or local governments. State and local governments are required to follow specific architectural standards in the new construction and alteration of their buildings. They must relocate programs or otherwise provide access in inaccessible buildings and furnish auxiliary aids when necessary to ensure effective communication with people with disabilities.

- ADA Title III: Public Accommodations

Title III has requirements similar to those of Title II, except that it applies to privately operated businesses, including nonprofits such as privately owned museums. It requires private entities that own, lease, lease to, or operate facilities to make reasonable modifications in order to ensure that their facilities, goods, and services are accessible to people with disabilities.

- ADA Title IV: Telecommunications

Title IV mandates the establishment of a nationwide telecommunications relay service. It also requires employers, state and local governments, and places of public accommodation (such as museums) to provide accessible telecommunications products and services to aid effective communication by people with disabilities.

- ADA Title V Miscellaneous Provisions.

Title V states, among other provisions, that federal laws shall not supersede state laws with more stringent accessibility provisions. (NEA, 2004)

Nothing in the ADA requires the manufacture of telecommunications products that are accessible. The Telecommunications Act (1996) fills this gap by requiring access to telecommunications equipment and services including telephones, faxes, computer modems, and software. For museums, it covers any transmission that travels outside of the museum such as websites transmitted on the Internet. (NEA, 2003).

Title III contains the following detailed explanation of private organizations that are defined as Public Accommodations.

“A place of public accommodation is a facility whose operations affect commerce; and fall within at least one of the following categories:

1. Places of lodging (e.g., inns hotels, motels) except for owner occupied establishments renting fewer than six rooms;
2. Establishments serving food or drink (e.g., restaurants and bars);
3. Places of exhibition or entertainment (e.g., motion picture houses, theaters, concert halls, stadiums);
4. Places of public gathering (e.g., auditoriums, convention centers, lecture halls);
5. Sales or rental establishments (e.g., bakeries, grocery stores, hardware stores, shopping centers);
6. Service establishments (e.g., Laundromats, dry-cleaners, banks, barber shops, beauty shops, travel services shoe repair services, pharmacies, insurance offices, professional offices of health care providers, hospitals);
7. Public transportation terminals, depots, or stations (not including facilities relating to air transportation);
- 8. Places of public display or collection (e.g., museums, libraries and galleries;**
9. Places of recreation (e.g., parks, zoos, amusement parks);
10. Places of education (e.g., day care centers, elementary, secondary, undergraduate, or post graduate public, or post graduate private schools).

11. Social service center establishments (e.g., day care centers, senior centers, homeless shelters, food banks, adoption agencies).
12. Places of exercise or recreation (e.g., gymnasiums, health spas, bowling alleys, and golf courses).” (ADA Title III Technical Assistance Manual Covering Public Accommodations and Commercial Facilities, pp. 8, 9, accessed 9/19/12)

Other Legislative Acts

The Architectural Barriers Act of 1968, The Rehabilitation Act of 1973 and, as civil rights legislation, the Americans with Disabilities Act 1990, are the result of a long social history. This legislation provides protections for senior patrons and persons with disabling conditions from accidents and potentially dangerous conditions. It facilitates participation by these groups in a broad range of social activities. The Department of Justice is responsible for ensuring compliance and has the power to take civil action to enforce not just changes, but punitive damages as demonstrated by the examples discussed in the following litigations against museums. Neglecting responsibilities outlined in this legislation, if reported to the Department of Justice, may result in a civil action with punitive costs. Once museums, (libraries, galleries, and places of collection and display) begin to identify inaccessible features and correct them voluntarily, they will be less likely to be involved in settlements such as those imposed on the International Spy Museum, MVLA, and the Newseum, Inc.

Three Legal Cases

An investigation and compliance review conducted by the Department of Justice can be brought about by a complaint or can result from a review by the Department of Justice itself. The ADA authorizes DOJ to investigate any complaint alleging a museum's failure to provide full and equal enjoyment of its goods, services, facilities, privileges, advantages, or accommodations in an integrated setting to individuals with disabilities. The ADA also requires the Attorney General to conduct periodic compliance reviews of public accommodations. The Attorney General is further authorized to commence a civil action in a United States court if it is unable to secure voluntary compliance in any case that involves a pattern or practice of discrimination or that raises issues of general public importance, and to seek injunctive relief, monetary damages, and civil penalties, 42 U.S.C. 12188(b)(1) (<http://www.ada.gov./newseum-sa.htm> p.3).

Case 1: International Spy Museum

Only one of the three cases outlined here came about as the result of a direct complaint. The International Spy Museum was investigated after the Department of Justice received a complaint in 2004 from Mr. Michael Byington, the president of the Kansas Association for the Blind and Visually Impaired. Mr. Byington, who is legally blind, alleged that he and a group of individuals who are blind or have low vision were denied full and equal enjoyment of the Museum's goods, services and facilities in violation of title III of the ADA. Specifically, Mr. Byington alleged that the

Museum's exhibits and programs were inaccessible to visitors who are blind or have low vision. For example, the Museum did not have guides or docents trained in providing accessible tours or computers equipped with speech outputs. The Museum did not provide printed materials, such as exhibit brochures or program handouts in alternate formats, such as Braille, large print or audio recordings. Mr. Byington stated that the Museum's failure to design accessible programs and services and thereby ensure that the content of its exhibitions, public programs, and other offerings were accessible and effectively communicated to individuals with vision impairments violated his rights under the ADA. (Department of Justice Press Release, DJ No. 202-16-130, pp. 1, 2008). In contrast to this, the MVLA and Newseum, Inc. Settlement Agreements do not list a complaint filed by an individual or by an advocacy organization.

Case 2: Mount Vernon Ladies' Association of the Union

The MVLA a private entity and owns the Mount Vernon Estate and Gardens. Mount Vernon's operations include restaurants, auditoriums, and a museum shop, all of which fall under compliance requirements of ADA. The site includes the Mount Vernon Mansion, the Mount Vernon Inn and Shops, the Donald W. Reynolds Museum and Education Center, the Ford Orientation Center structures and grounds, and public walks connecting various structures. The U.S. Department of Justice found 68 violations of the Americans with Disabilities Act. One major problem was the lack of handrails on both sides of sloped paths between buildings and gardens on the property.

Case 3: The Newseum

The Newseum, Inc. was cited for 90 infractions and fined \$15,000 in addition to the cost of correcting violations. In Newseum's Settlement Agreement the Department of Justice identified the specific auxiliary aids they required. This is the first time in these three Settlement Agreements that DOJ spells out exactly which Assistive technologies they require for compliance.

- (1) Qualified interpreters on-site or through video remote interpreting (VRI) services; note takers; real-time computer-aided transcription services; written materials; exchange of written notes; assistive listening devices; assistive listening systems; open and closed captioning, including real-time captioning; videotext displays; accessible electronic and information technology; or other effective methods of making aurally delivered information available to individuals who are deaf or hard of hearing.
- (2) Qualified readers; taped texts; audio recordings; Brailled materials and displays; screen reader software; magnification software; optical readers; secondary auditory programs (SAP); large print materials; accessible electronic and information technology; or other effective methods of making visually delivered materials available to individuals who are blind or have low vision. (www.ada.gov/newseum-appendix1.htm pp.22-43)

A further discussion of these required auxiliary aids can be found in Chapter 7 along with materials on other assistive technologies.

The Department of Justice developed a schedule for the Newseum to follow and a procedure of reporting their progress in obtaining resolution of these infractions. Failure to comply with this process would result in a court action and additional fines. Listed as Remedial Measures, this process reads as follows:

- (1) Within one year (12 months) of the Effective Date of this Agreement, the Newseum, Inc. shall complete all remedial measures identified in Appendix 1 and the remedial actions to its website in Paragraph 20.
- (2) Within sixty (60) days of the Effective Date of this Agreement, the Newseum, Inc. has designated and shall continue to designate an ADA Compliance Officer and provide the individual's job description to the Department. No later than sixty (60) days after the selection, the Newseum, Inc. shall ensure that the ADA Compliance Officer undergoes training on the Newseum, Inc.'s obligations under the ADA and this agreement, at the expense of the Newseum, Inc. The Ada Compliance Officer shall be responsible for handling disability-related complaints from the patrons of the Newseum, Inc. and for ensuring the Newseum, Inc. compliance with the ADA and this Agreement.
- (3) Within sixty (60) days of the Effective Date of this Agreement, the Newseum, Inc. shall develop an ADA Complaint Resolution Policy to address ADA-related complaints and shall provide a copy of the policy to the Department for review and approval. This policy shall identify the

ADA Compliance Officer, the procedure for filing complaints, and the process by which complaints will be investigated and resolved. The Newseum, Inc. shall implement the policy within thirty (30) days of approval by the Department.

(4) Within sixty (60) days of the Effective Date of this Agreement, the Newseum, Inc. shall, under the direction of the ADA Compliance Officer, train all supervisors and managers on the Newseum, Inc.'s obligations under the ADA and this Agreement. The Newseum, Inc. shall ensure that all newly hired supervisors and managers receive this training within thirty (30) days of hire or promotion.

(5) The Newseum, Inc. shall provide a written report annually to the Department regarding its progress with respect to the completion of its obligations under this Agreement, including under Section E. The report shall identify and document (e.g., with copies of construction contracts, photographs and/or design drawings) the revisions that have been made and any training of employees that has occurred (by date and the content of the training), as well as provide copies of any ADA-related policies that the Newseum, Inc. has adopted. The report shall be provided to the Department annually on the anniversary of the Effective Date of this Agreement, except that the last report shall be provided three months prior to the expiration of this Agreement. If, prior to the expiration date set forth in Paragraph 40, the Newseum, Inc. can certify that it has fully

complied with the terms of this Agreement and completed all the remedial measures listed in Appendix 1, and the Department accepts that certification, then the Newseum, Inc.'s continuing obligation to file annual reports under this paragraph will cease.

- (6) Within thirty (30) days of the Effective Date of this Agreement, the Newseum, Inc. shall deliver to counsel for the United States a certified check in the amount of \$15,000 (fifteen thousand dollars), payable to the United States Treasury.
- (7) The Department shall have the right during the course of this Agreement and with seven days notice to the Newseum, Inc., to conduct inspections of the Newseum, Inc., and to request documents or photographs in order to evaluate compliance with this Agreement. The Department shall make every effort to conduct its inspections at times that are agreeable to the Newseum, Inc. so as to cause minimal disruption to its operations.
- (8) If the Department believes that the Newseum, Inc. is not in compliance with this Agreement or any of the requirements contained herein, the Department will notify the Newseum, Inc. in writing of the alleged noncompliance and attempt to seek a resolution of the matter with the Newseum, Inc. If the parties are unable to reach a resolution within thirty (30) days of the date of the Department's written notification, the Department may seek enforcement of the terms of this Agreement and/or the ADA in court.
- (<http://www.ada.gov/newseum-sa.htm> pp.8-10)

Similar wording is included in the settlement agreements for the International Spy Museum and the MVLA. The Newseum, Inc. agreement identifies appropriate technologies not identified in these other cases.

There were many features sited at all three museums that presented hazards and/or challenges for persons with limited mobility, vision or hearing. The theaters at all three museums were found to lack integrated wheelchair spaces and companion seating and appropriate assistive technologies. Protruding objects, tripping and injury hazards, were present throughout the exhibitions. Restrooms were inaccessible. For example stalls were too small; grab bars were either too small or mounted wrongly, as were mirrors and towel dispensers. Other problems included excessive force needed to push or pull open doors, ramps without handrails, and an overall lack of appropriate disability signage identifying restrooms, elevators, and other services. All three museums have gift shops where merchandise was found to be displayed higher than the 48 inches required for patrons in wheelchairs; and counters were too high from the finished floor.

These museums became the target of litigation because they failed to make their exhibits, public programs and other events accessible and failed to furnish appropriate assistive technologies and services to ensure effective communication for patrons with disabilities. The Department of Justice has established several pathways to achieve voluntary compliance. There are several government

publications available which explain these laws and how to obtain guidance in addressing these concerns.

These settlements with the United States Department of Justice demonstrate a lack of awareness that compliance is required of museums, and a lack of knowledge concerning what constitutes compliance with the Americans with Disabilities Act and other Civil Rights Laws. Since first writing this chapter the Department of Justice has announced another Settlement Agreement with a cultural facility, the Lincoln Center of Performing Arts in New York City, for many of the same accessibility issues. The history of Department of Justice's settlements with medical facilities, transportation companies, restaurants, theaters, sports stadiums, swimming pools, golf courses, hotels and resorts goes back to 1990 when the ADA was enacted and Congress mandated the Department of Justice to enforce these laws. This long history of settlements has only addressed Title III of the ADA, public accommodations. The Department of Justice has yet to identify the full range of institutions that fall under the definition of museums and related entities. Libraries, zoos, botanical gardens, art galleries, and many other places of public education may one day experience the Department of Justice's process as these three museums have.

CHAPTER VI

CASE STUDIES AND THE ASSESSMENT CHECKLIST

In previous chapters I have described the evolution of collections from enclaves of exclusivity to the hospitable places of informal education we now know museums to be. They are also now operated for the most part by trained professional staff. I have discussed the emergence into public participation of American citizens whose freedoms were marginalized by illness and convention. Persons who were once institutionalized have gained the right to enjoy affordable housing, access to public transportation, and gainful employment. Like other American citizens, they are entitled to participate in all forms of recreation, including attending cultural facilities like museums. In chapter five I explored the intersection of these two histories by explaining disability law as civil rights law and the accommodations required by museums and other facilities to insure the safety of these and other Americans as we visit museums.

In this chapter I present my accessibility checklist, based on the legal sources discussed in Chapter V and the outcome of four local museum assessments.

The Design

The accessibility checklist combines the requirements for accessible design found in the following references:

1. NEA, *Design for Accessibility, A Cultural Administrator's Handbook*, 2005
2. SI, *Guidelines for Accessible Design, Smithsonian Accessibility Program*.

3. ADA, *Standards of Accessibility*, 2010
4. ABA, *Accessibility Guidelines*, 2010
5. AAM, *Everyone's Welcome, The Americans with Disabilities Act and Museums*, 1998.

These five sources provide specific requirements museums should meet to comply with the ADA--for example, the distance between exhibits, the type and placement of carpets, and the use of Braille and large print in exhibits. I chose these sources in order to address accommodations for both communication and physical barriers. The ADA *Standards of Accessibility* set the current federally mandated requirements for providing accommodation for individuals with disabling conditions. The ABA *Accessibility Guidelines* identify physical problems that deny accessibility to a patron visiting a museum, art gallery or other cultural institution.

Physical barriers include the width of doorways, the inclination of ramps, the use of handrails, and the path of travel while viewing an exhibition. The NEA's *Design for Accessibility* is the only guide that includes enforcement of compliance with ADA and outlines penalties for noncompliance. I am using, with permission, their graphic representations to illustrate problems and solutions as presented in the ABA. Further, the NEA has a good summary of laws affecting disability compliance.

Of the remaining accessibility guides available, I chose the Smithsonian *Guidelines for Accessible Design* for their complete treatment of exhibition and

display font and text benefitting individuals with low vision and persons with cognitive challenges. The Smithsonian offered one piece of advice: “Items essential to the exhibition's main theme must be accessible to people by tactile examination (e.g. touching artifacts, reproduction, models) and/or comprehensive audio description.” (Majewski 1996, p. 12) I have chosen to use the Smithsonian guidelines because museum professionals consider these museums to be the benchmark of American museum culture. The AAM’s publication, “Everyone’s Welcome, The Americans with Disabilities Act and Museums” presents many useable recommendations and a solid representation of the ADA Standards of Accessibility, voluntary compliance and Enforcement for non-compliance. John Salmen developed this accessibility guide with the assistance of the DOJ. Of the many useful recommendations, the following is particularly important:

“Establishing a special program designed to enhance the experience of people with specific disabilities does not fulfill the overall requirements for access.”

(Salmen, 1998, p. 24.)

Implementation

I focused on medium and smaller sized museums and art galleries for this assessment, two housed in historical buildings and two in dedicated buildings. Each survey began at the parking lot or city sidewalk (with one exception) and traveled the path visitors to the museum must take. Using a checklist (See Appendix C) I measured and recorded the widths of parking spaces, the steepness of ramps, the widths of doors, and the presence of hazards that might cause a person an injury

from falling while visiting the museum. I measured ramps, stairways, elevators, and restrooms and many other features to discover barriers to accessibility for persons with such disabling conditions as mobility, strength and stamina, low vision, and hearing loss.

The results were similar to the findings of the DOJ compliance reviews presented in Chapter V. I found objects protruding into the path of travel near exhibits, exhibits and shelving protruding more than four inches from the wall presenting issues for persons using a cane, cracks in pathways and floors presenting tripping and falling hazards, and issues with toilet rooms. (None of these sites included a theater). One version of the assessment incorporated changes to make it easier to record information that will be summarized in the written report for each participating museum. In the reports, I included: 1) the DOJ requirements for auxiliary aids; 2) links to explain what these assistive technologies could accomplish; and 3) contact information for vendors supplying these materials.

Assessments

Each of the two museums housed in an historic building has different challenges in remodeling to meet ADA requirements. Another museum had remodeled its original museum building in 2005. All three of these served to refine architectural and exhibition aspects of the checklist. A tribal museum was included to emphasize the variety of cultural institutions affected by the ADA.

The Kittitas County Historical Museum

Formed in 1961, this small museum focuses on local history preservation and dissemination. The exhibits are filled with items from collections donated by local businesses and the area's founding families. The museum offers lectures and school tours and participates in First Friday Art Walks.

On September 12, 2013, I visited the Kittitas County Historical Museum (KCHM) to do a walk-through using a newly developed checklist. I had met the Director, Sadie Thayer, on several academic field trips and had volunteered with this museum to assist with a collections inventory. Ms. Thayer graciously let me begin my research with her museum.

The museum was built from the street level floors of three buildings. The floor plan contains four ramps and two emergency exits. There are several single chairs throughout the exhibition and an accessible restroom. I began the assessment at the city sidewalk in front of the building. Using a tape measure, I tested all the design features of the museum against those listed in the ABA. The sidewalk was clear of debris and had no cracks that would create a tripping hazard for persons who rely on canes or walkers and individuals with other mobility challenges. The threshold of the front door is within required limits: no higher than 1/2 inch. The double doors measured in the open position at 68 inches wide, exceeding the current standard of 36 inches wide. I began my inspection of the internal aspects in the Entry Room and proceeded into the Main Room. Carpeting throughout the museum meets specifications of providing a firm, solid footing, attached to the floor.

There is a short, steep ramp between the Entry Room and Main Room, and another, larger ramp from the Main Room into the Car Room. After measuring and inspecting the Car Room I proceeded across the Main Room to the Parlour Room, which is joined by another short, steep ramp. From the Parlour Room, I entered the Military Room. I then reentered the Parlour Room and proceeded down another, longer ramp into the Business Room where I concluded my assessment.

Recommendations for addressing problems that were identified are as follows:

1. Place printed handouts of the floor plan at the reception desk. They should include the location of the emergency exits.
2. Increase exhibit and display signage font. Throughout the museum, exhibit and display signage is in too small a font. The recommended font is 18-24 point. New technologies may offer solutions. Disability Apps are available on tablets and smart phones, enabling these devices to be used as text magnifiers. Other features on smart phones include text readers. Descriptions of the display should be available in Braille at each display. You can find this information in the Smithsonian's Guidelines for Accessible Design pages 17-26.
3. Have printed materials and tactile examples available for patrons to touch when artifacts are displayed in closed cases. To improve the modality of learning, printed information could be coded on QR Codes, making the information available on a tablet or smart phone serving the requirements of

both an analog and digital application. QR Codes can also present sign language in a video format and different languages in a text format.

4. Place warning signs at the two steep ramps to warn patrons about the sudden increase of slope in a short ramp. I cannot recommend any changes to these ramps without compromising safety and causing a tripping hazard with an extension into the path of travel on both sides of such an extension. To remedy these problems an architect should be consulted. These short ramps are from the Entry Room to the Main Room and from the Main Room to the Parlour Room. The current ratio for compliance is one foot of length for each inch of height. The other two ramps are within the guidelines for the length and height of ramps.
5. Place objects that protrude into the path of travel on pedestals. In the Business Room and the Car Room a few of the large metal farm and tool artifacts protrude into the path of travel and pose a tripping hazard.

Most of the problems had to do with the font of display text used, and tripping hazards near large farm implements and other displayed objects. These problems can be readily changed without much cost. The problems presented by the museum having been assembled from other buildings with floor heights at different levels would require an architect to remedy, and the changes could be costly.

I learned how difficult the checklist was to use to collate all the measured values of doorways and other design features. The information gathered was not

affected, but report writing was made difficult by having to constantly look up the required measurements for all these design features. The next draft of the checklist included the required specifications next to each entry of a new measurement.

The Yakima Valley Museum

This medium-sized locally-focused museum has extensive collections of cultural items that reflect the history of the Yakima Valley and the surrounding region. The museum houses a children's museum, a gift shop, and a functional historic Soda Fountain. It owns a nearby historical building that is being developed for tours and events. Multiple weekly programs include tours of local historic places as well as story time for children. This facility hosts an annual meeting, music festival, and fundraising events.

I met Andy Granitto, Curator of Exhibitions, at the reception desk and began our conversation about how this assessment would benefit the museum by showing what design elements need to be changed to provide a safe visit for patrons with disabling conditions. On November 22, 2013, I arrived at the Yakima Valley Museum early to begin my assessment in the parking lot, which the museum shares with a swimming pool and a park. The parking lot has recently been redesigned. Handicapped parking spaces favor the other activities and not the museum. The entrance doorway meets the requirement of 36 inches and the threshold at this entrance is below the height of $\frac{1}{4}$ inch. Lighting throughout the museum was very good.

The path of travel between exhibitions was unencumbered and exceeded requirements. I complimented the use of platforms to support the wagon tongues and other protrusions, as they extended out far enough to prevent a patron with low vision from tripping and possibly falling. Andy spoke of the plastic horses they use on several of the wagon displays as another way to prevent patrons from tripping over the wagon tongues. The carpeting in the museum provides a firm footing and together with the beveled edging does not exceed the maximum allowed height of ¼ inch.

The Museum was built in the 1950's and remodeled in 2005. Several changes to the museum are compliant with the Architectural Barriers Act. The stairway has been replaced to meet the new requirements. Mr. Granitto showed me a staircase from the original construction in an area not accessed by museum patrons. The stair steps were too deep and could cause a patron to trip. The new stairway measured correctly, including the handrail at 34 inches above the stair tread and a cane safe rail at four inches above the stair treads.

Including the entrance ramp, the museum has three ramps. One ramp leads into a children's area. The slope of the path of travel meets the requirement of one foot of travel for every inch of height. Andy explained how the children's area was scheduled to be remodeled.

Exhibit text was in the correct font size and writing style. The presentation of artifacts was in the form recommended by the Smithsonian's Guidelines for Accessible Design. I explained the use of QR Codes and Disability Apps as a method

of enhancing exhibition text and Andy showed me where he had included a QR Code in one of his display texts.

In order to address the problems that were identified, I made the following recommendations:

1. Move Handicapped parking spaces, including van parking spaces closer to the museum. A blue painted walkway needs to be added from these parking spaces to the beginning of the ramp, to show the accessible path of travel.
2. Mark the accessible path of travel with disability signage.
3. Eliminate the use of small tables at the center of the floor space in the bookstore. These tables pose a falling hazard for patrons with low vision.
4. Add pedestals to all wall-mounted display cases over 4 inches deep. These need to have pedestals added to them to provide cane-safe warnings of a protrusion in the path of travel for patrons with low vision who may use a cane.
5. Have printed materials and tactile examples available for patrons to touch when artifacts are displayed in closed cases. Sign Language could be offered by QR Codes with video presentation and multiple languages could be displayed by QR Codes presenting text information.
6. Install a handrail along the ramp in the children's area. ADA requires a handrail at 28 inches above the path of travel to accommodate children.

7. Post disability signage at the elevator, restrooms, drinking fountains, stairways, emergency exits, reception desk, and both ends of the entrance ramp.
8. Replace existing benches with accessible benches. The technical requirements listed by US Department of Education identify a bench to be “a minimum of 42 inches long. The height of the seat to be 17 to 19 inches above the finished floor. The back support is a minimum of 42 inches in length and extends from a point of 2 inches maximum above the seat to a point 18 inches minimum above the seat. The carrying capacity for this bench is 250 pounds.” (See Figure 1).

The assessment checklist found problems related to persons with age-related conditions, such as strength and stamina, mobility, low vision and hearing loss. Many of the problems found can be made compliant without a major capital investment.

As the Yakima Valley Museum was remodeled in 2005, the stairways and ramps exceed the requirements of the ABA. Quality exhibit lighting to eliminate shadows and glare on exhibits is found throughout the facility. The layering of display text in multiple sized fonts and the use of QR codes to enhance exhibit text works well. There is ample room between exhibits and nothing protrudes into the path of travel. Where carpeting was present it was firmly attached and less than a

quarter inch thick. Where carpeting met a solid floor the edge of the carpeting did not present a tripping hazard.

I found the checklist easier to use than previous drafts, especially when the assessment was over and the report writing began. Having all the required measurements available on the checklist made it easier to compare standard measurements with case study measurements. For example, was the handrail for children at 28 inches from the finished floor and the slope of a ramp at 12 inches of run for every one inch of height? What did not work well was the need for extra sheets of paper for a facility with more than a couple of rooms and several floors. Having to relate to a clipboard and multiple pieces of paper was a distraction. Using an iPad or similar device would make the checklist more efficient. Then a larger facility with multiple floors could be assessed by a team and downloaded into a template for the reporting process.

The checklist provided a way to determine how the Yakima Valley Museum was compliant with the ADA and the ABA. I was able to find what worked and where the facility was vulnerable.

The Yakama Nation Museum

One of the oldest institutions of its kind (formed in 1980), the Yakama Nation Museum, while relatively small in size, has a huge mission: preservation, promotion and education of Yakama Tribal Culture. Collections contain archaeological, artistic,

photographic and ethnographic items. The museum has a gift shop and shares its building with other tribal businesses.

On November 22, 2013, the same day that I visited the Yakima Valley Museum, I traveled South to the Yakama Nation Museum, in Toppenish, Washington. I had met with Pam Fabela, Director of the Yakama Nation Museum, several times with Dr. Mark Auslander concerning the development of a cooperative exhibition with the Museum of Culture and Environment of Central Washington University. The exhibition would be centered around the Yakama Nation's 160th anniversary of the signing of the Treaty with Territorial Governor Isaac Stevens in 1855.

As a personal favor to a museum studies student (myself), Pam agreed to an assessment of their museum. The museum is part of a larger cultural center facility that also includes offices, restaurant, library and gift shop. Parts of the facility are being remodeled so I began my assessment in the museum and not in the parking lot.

All of the display cases are enclosed and are built from the floor providing a good cane safe protection for patrons with low vision who may use a cane to navigate. The text and font size are good. The lighting is very good and the carpeting meets the requirements of being less than $\frac{1}{4}$ inch thick. The path of travel between exhibits is wide and exceeds the requirements. There is one ramp with a landing in the museum. The landing exceeds the requirement of 60 inches square required for the passage of two wheelchairs. The path of travel on the ramps meets the

requirement of one foot of travel for every inch of height. There are more benches at this museum than most.

In order to address the problems that were identified, I made the following recommendations:

1. Provide printed materials to explain what the artifacts are and what the display is about as the displays are in closed cases. The use of new technologies such as QR Codes and Disability Apps would enhance these display texts.
2. Provide tactile replicas of artifacts such as beadwork, leather work, baskets, and other objects to be brought out by a docent and shared with visitors and or patrons with low vision. This would lessen the possibility of objects being lost. Perhaps the use of 3-D printers could replicate these artifacts to provide tactile objects for persons with low vision and for other patrons to enjoy.
3. Post disability signage near restrooms to guide persons with low vision to where the toilet rooms are located.
4. Replace the existing benches with accessible benches.

The Yakama Nation Museum is a permanent exhibition designed to educate visitors about the cultural heritage of the Yakama people. Both museums recognized a need to provide seating for patrons who may have strength and stamina related conditions. I noticed a common flaw at both the Yakima Valley Museum and the Yakama Nation Museum: homemade benches. I extended my

research to locate the definition of the kind of benches required in the ADA and found information on materials offered by the U.S. Department of Education. I also researched the use of 3-D printers for the replication of fragile artifacts to solve the problem of providing tactile objects for persons with visual impairments and school children visiting on a fieldtrip. Using actual artifacts could damage them over time, so replicas should be provided.

Again the checklist performed well, but I did change one design feature. The checklist had been arranged by disabilities type in the second draft. This format was used because the original outline for the checklist had been formatted by disability categories. Having the checklist focused on disabilities added to the number of pages required and again interrupted the flow of the assessment. The checklist was changed back to a walk-through format for the third draft, focusing on issues as they presented in the museum.

Gallery One

As a visual arts center, Gallery One promotes innovative, high quality exhibits as well as educational programs. Often functioning as a public meeting place, many different programs are offered weekly. There are no permanent collections, and most of the art on display is for sale.

On April 30, 2014 I met with Monica Miller, the Executive Director of Gallery One at the reception desk. We had not met previously in person. Monica

accompanied me on a walk-through showing the layout of her facility. I spoke of concerns as we encountered them and before doing the assessment.

Gallery One has a gift shop, working studios, and classrooms on another level. This facility has ample space for patrons with mobility issues including individuals using wheelchairs. The two toilet rooms meet the requirement of a turning radius of 60 inches. The elevator control panel has been updated and lowered to accommodate use by patrons with limited reach. Classrooms have height adjustable tables. Lighting throughout the facility was excellent. Of the three entrance doors, there are two entrance doors facing the street. One door enters into the gallery and meets the requirement of 36 inches in a fully opened position; the other door enters into the gift shop and is not ADA compliant. As this is an historic property, the entrance into the gallery adjacent to the main entrance should be used by patrons using wheelchairs and requires no other modification. Compliant seating was found throughout the facility. All the floors are hardwood without any rugs or carpeting. The staircase is in full compliance. All the benches meet ADA requirements.

In order to address the problems that were identified, I made the following recommendations:

1. Sweep the rear entrance regularly of larger stones and wood debris, which could cause tripping and would prove difficult for children in manual wheelchairs to cross, as the rear entrance to the facility is used to receive school children.

2. Place additional small sized gravel on the path leading to the bricked courtyard. The place where the graveled path meets the courtyard needs to be level to prevent a tripping hazard.
3. Raise the cover of the water meter or other valve in the brick court yard. The recessed surface presents a tripping hazard. The cover should be raised to the level of the courtyard.
4. Repair the cracks in the main floor to avoid a tripping hazard. An injury from falling should be avoided. Such an injury can be difficult for persons with mobility issues and patrons with age related conditions.
5. Replace or add a second mirror that depicts a person's full height in the toilet room on the main floor. Additionally the handle on the paper towel dispenser is at 64 inches and needs to be lowered to no higher than 48 inches to accommodate a patron using a wheelchair. The plumbing under the sink requires an insulated covering to prevent a person in a wheelchair from becoming burned by or tangled in the plumbing.
6. Add water dispensers to each floor. The facility lacks drinking fountains. ADA requires two fountains per floor.
7. Color the floor a different color where it slopes from the main entrance. The ADA requires a change of color to signify sloping in the floor. This is similar to the change in color on your staircase to signify the edge of a step to a patron with low vision.
8. The Gift Shop area has three issues which may be addressed as follows:

- A. Place objects on shelves no higher than 48 inches and no lower than 15 inches from the finished floor. Many of the articles for sale are above the reach range for a patron in a wheelchair.
 - B. Make a cane-safe feature. A platform or box should be installed on the floor that has the same width and length as the shelf above it to signify to a cane user the barrier to be avoided. The shelves mounted to the wall extend out and present a problem for individuals who are blind or have low vision and are employing a cane. Without such addition a person using a cane could walk into the shelf resulting in an injury.
 - C. Install an accessible counter on the retail side of the reception counter similar to the one on the other side.
 - D. Mount a grab bar in the toilet room on the second level. It should be mounted no higher than 27 inches from the finished floor. Add a full-length mirror, and towel dispenser lowered to 48 inches to accommodate children and individuals using wheelchairs.
9. Round all exposed wall corners like the one located in the classroom.
10. Place benches against walls to aid stability and avoid a tipping problem.
11. Install a barrier at the top of the stairs leading to the second level. I recommend something like the folding screen used to secure the entrance when the facility is closed.
12. Post disability signage at the elevator, staircases, toilet rooms, and emergency exits.

The checklist identified many features that work well in Gallery One. Many of the recommendations will not require an extensive capital outlay to bring the facility into total compliance. For example, I have identified a way to measure whether a door can be safely opened. The required measurement is 5 pounds of force (5pf). The tool used is a fish scale for measuring the weight of a fish (prices range from \$17-40). By placing the hook on a door handle and slowly pulling the door open the fish scale shows how many pounds of force are required to open the door. This measurement should be done on all doors including the doors into stalls in toilet rooms.

The assistive technologies required by the DOJ, as identified in the Newseum, Inc. settlement agreement and discussed in chapter V, require significant capital investment. I became concerned with the prices of these assistive technologies after compiling a list of hyperlinks to explain what these technologies are and who provides them. I include this listing in the links section of Appendix B.

I continued research into the possibility of tax credits for assistive technologies and found the U. S. Internal Revenue Service provides tax credits under Title 26, Section 44 and Title 26, Section 190. These tax credits pay up to \$5,000 on a \$10,000 purchase and installation. Having located these tax advantages, I have shared these resources with the museums participating in this study.

Findings of Assessments

The assessment checklist I developed identified the same types of violations recorded in the U.S Department of Justice settlement agreements covered in Chapter V:

- Toilet rooms need grab bars.
- Plumbing under sinks need to be covered.
- The heights of mirrors and paper products need to be adjusted.

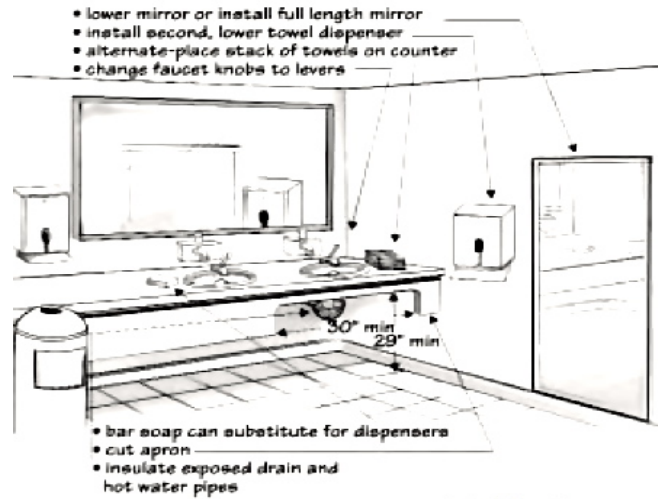


Figure 2. Remodeled Lavatory.

- Disability signage is lacking.



Figure 3. Sample Disability Signage

- Brailed handouts are required, as are auxiliary aids for persons with low vision and persons with hearing loss.

- The path of travel from a vehicle to the facility and around exhibitions needs to be cleared of hazards.



Figure 4. Tripping hazard of uneven path of travel.

- Objects for sale need to be within the reach of persons using wheelchairs



Figure 5. Displays and counter tops at Gift Shop

- Counters in retail areas need to be lowered.
- Cane safe features need to be added.
- Tripping hazards within exhibition spaces.



Figure 6. Wall mounted cane hazard made safe.

The assessment checklist developed for this research works well to address compliance issues and therefore avoid the federal process involving deadlines and fines. This assessment tool would be useful to museums, art galleries, restaurants, and other enterprises that have features common to public education, restroom facilities, food service, and retail.

CHAPTER VII

AN AGE OF TECHNICAL SOLUTIONS

Understanding disability in America is intricately tied to the advancement of assistive technology (AT) and adaptive devices. In an effort to build a more inclusive society, AT is a remedy and a tool that increases a person's independence. Daily activities such as housekeeping as well as transportation including bus lifts and elevators are all enhancements to independence. Devices that aid in essential body functions such as breathing, hearing and seeing are all part of AT for better lives.

Technology has an important role in promoting equality and access for people with disabilities. From lawsuits have come laws and policies mandating technology services for use in education and to serve the public.

In Chapter V, I presented settlements between museums and the DOJ in which DOJ identifies the requirements of assistive and adaptive technologies. In the settlement with the MVLA under the Terms of Agreement, the DOJ identifies MVLA's need to "provide auxiliary aids and services to ensure that the content of its exhibitions, public programs, and other offerings is accessible and effectively communicated to individuals who are deaf or hard of hearing or who are blind or have low vision (para. 21)."

In paragraph 22 the DOJ writes further: "The MVLA shall maintain and update its auxiliary aids and services and the content of accessible programs, printed material, alternate formats, and other offerings, to ensure that its public

programs and other offerings are accessible and effectively communicated to individuals with disabilities.” (www.ada.gov/mt_vernon/mtvernon.htm; p.3)

In the Newseum Inc., settlement the DOJ identifies these auxiliary aids and adds specific assistive and adaptive technologies.

DOJ’s requirements reflect the change from analog to digital technology allowing assistive applications to be included in mainstream consumer electronics such as tablets and cell phones. In the past few years assistive technologies like voice to text, text to voice, screen readers, voice recognition, retina control, and screen magnification have been made available to everyone, fulfilling the long-awaited goal of universal design. Universal design was once thought of as a utopian concept. Before the miniaturization of technology and the increased power of computer processors, assistive applications were programs available on personal computers.

Communication is a required accommodation for individuals of all ages with disabling conditions. Technologies have been adapted to provide accommodations that assist people while communicating or navigating at a museum. These applications are called assistive and adaptive technologies. Assistive technologies have become popular and have influenced our culture more than one would guess. For example; texting on cell phones, and tablets began as captioning; The GPS feature of phones was first developed for the U.S. Navy to keep track of early submarines under the polar ice. The first wearable GPS weighed 40 pounds and was accurate to within a couple of hundred feet. Today’s GPS is an application available

on cell phones and tablets. Recently a wayfinding system has been developed for both indoor and outdoor locations for persons with visual impairments. The company developing this technology markets to facilities and does not charge users of the product. More information on wayfinding can be found at www.ClickAndGoWayfindingMaps.com.

A Brief History of Assistive Technology

Like ADA legislation and museum inclusivity, changes in technology began with small steps and have gained momentum over time. For example, prosthetic limbs such as artificial legs and arms date to the colonial period. These early forms were made from wood or metal and crafted by local artisans to serve functional purposes for everyday living. The Civil War changed the way prosthetic devices were made. New materials and production in mass quantities made prosthetics available to many more individuals. Today prosthetics has reached new scientific heights using cutting edge materials, and reflecting the higher expectations of the newest generation of amputees. For example, the “Cheetah” carbon fiber J shaped blades (legs) developed in the 1980’s, provide a distinct advantage to elite athletes with disabilities over their able-bodied competitors.

Hearing aids are another historic assistive device. Mechanical devices such as the ear trumpet intended to aid in hearing were present in early American history. The first electronic hearing aids appeared after the invention of the telephone. Over the next century, innovations in electronic components helped hearing aids become smaller and more powerful devices. As some scholars have noted, the proliferation

of hearing aids embodies important cultural values. In the early 20th century devices were masked as earrings or other gendered accessories in order to downplay women's and men's impairment. The original light colored external materials, intended to blend with the user's body, presumed that only white customers needed or used hearing aids.

In the late 1920's radios were distributed by the National Federation of the Blind to help visually impaired persons access information. Thomas Edison's phonograph allows the production of talking books for persons with low vision, in the late 1930's. Also that decade, the first versions of text-to-speech and speech-to-text technologies were introduced. This system was known as the Voder. This system later became known as the Dragon System, or Simply Speaking, a program in use today by a diverse population of both professional and private individuals.

George Klein designed the first electric wheelchair in 1950. Just as walkers, canes, and wheelchairs assist people with mobility impairments, adaptive devices, which modify the environment also encompass a wide range of innovative examples, including ramps, audible pedestrian signals, lifts, grab bars, one handed can openers and specialized light switches.

Theaters were the first accessible venue for the hearing impaired with the invention of the slide projector or as it was called then, the "Magic Lantern" in the 1890's. There are now projectors capable of showing films with life-like clarity that use technology with only one moving part: a cooling fan. And what would have become of popular music without the record player? As technologies have changed

so have consumer electronics and with them assistive devices. In the span of a few years we have witnessed the evolution of digital systems replacing analog.

Challenges and Opportunities for Museums

These rapid changes in technologies have presented problems for museums and other cultural facilities. Some of the assistive technologies required by the Americans with Disabilities Act, such as Assistive Listening Devices (ALD), are analog. Digital is the current trend and most often patrons will be using devices enabled with assistive technologies like text readers and text magnifier apps for their personal cell phone or tablet. This poses a problem for museums and other cultural facilities. If they embrace new technologies they run the risk of being litigated for not having the analog systems spelled out in the law, and which some patrons may still be using.

Museums need both analog and digital applications to support multi-modal presentations of information in exhibitions. By anticipating a wide range of disabling conditions, many not readily identifiable when meeting patrons, museums can become part of an inclusive community.

In the past year the use of QR codes has developed to deliver both text and video formats. Another technological development known as 3-D printing can replicate fragile artifacts to provide tactile displays. 3-D printing is currently being used in several commercial applications including the aerospace industry. Apps for smart phones and tablets are available for language translation. A person can place a cell phone or tablet upon the display text and have the text appear on the device's

screen in the desired language. Other Apps are available to be used in the same way to magnify text, or to provide an audible reading of the printed display text.

Museums will still need to provide a range of accommodations, such as printed handouts displaying emergency exits, restrooms, restaurants (if available), and floor plans. Brailled materials will still be required, as will many of the required technologies identified in the DOJ settlement with Newseum Inc.

Measures of access and use indicate that we are in a rapidly changing transition phase. According to the Pew Research Center's Internet and American Life Project, 85 percent of adults use the Internet. Even more dramatic is who is using it: 98 percent of 18-to 29-year olds, 83 percent of 50-to-64-year olds, and 56 percent of those 65 and older. As of the summer of 2013, 91 percent of adults had cellphones, and 51 percent of adults have smartphones, an increase from 35 percent only two years earlier. (Ressler, S., 2013)

With the continual advancement of technologies and the passing of the generation known as "Boomers," analog applications will be remembered as outdated objects in technology museums similar to the eight track tape player, the Commodore computer, and the Brother word processor. Someday, wayfinding will exist as a common application on whatever replaces the smartphone.

In reviewing the settlement agreements between the Department of Justice and the three cultural facilities named in Chapter V, five ideas become evident: First, in all three cases the settlement requires designating or hiring someone to become an ADA Compliance Officer. Secondly, the DOJ investigates complaints as

they occur. Given the length of time between settlements, (the first settlement took place in 2008 and the latest in 2014), it is clear that there needs to be more effort to inform relevant institutions of the Department of Justice's expectations and powers regarding accessibility. Third, an awareness (through education) of what accessibility is and what it means to patrons needs to be developed in all museum staff so that misunderstandings in this regard can be avoided. Fourth, the need for up to date information in inclusive accessibility for those who work in museums, including directors, staff, interns and volunteers. Fifth, academic training in museum studies is the only relevant method to create a cultural change resulting in inclusive programing.

CHAPTER 8

SUMMARY

Today's idea of accessibility is an inclusive community creating a cityscape where all citizens have equal access to all activities. An inclusive museum seamlessly and subtly accommodates people of all levels of ability, thereby enhancing every patron's exhibition experience.

Accessibility is about accommodating people of varying physical and cognitive abilities and is defined by law. By exploring these laws and how they apply to museums and museum-associated enterprises, I discovered a need for museums to evaluate their compliance with the Architectural Barriers Act, the Rehabilitation Act and The Americans with Disabilities Act, and thus to avoid litigation in Civil Court and actions by federal agencies

I have illustrated how history of the disabilities rights movement is related to the history of accessibility and museums. Three recent legal cases draw attention to the importance of timely compliance with the ADA, RA and ABA. Compliance issues revealed in those cases are similar to the museums that participated in my research. My checklist assessment is very applicable to any museum of any size desiring to achieve voluntary compliance. With the rapid changes in consumer electronics, this process of compliance will be ongoing.

Compliance can take many forms, with technology leading the way for the most inclusive results in a media-centered culture. What the DOJ is recommending for museums in the Newseum settlement are both active and passive assistive

technologies. At present we are in a transitional time. Many of the “Boomer” generation have yet to acquire the skills of using digital devices. For this reason printed and Brailled handouts and exhibit displays are still required to ensure a multimodal-learning environment. As time passes the reliance on total digital exhibition will come of age.

Lacking a means to define how vulnerable museums are to litigation, I designed and implemented an assessment checklist based on the ADA and ABA to evaluate museums. I refined the design of this assessment tool with the help of several regional museums and then applied the assessment to an art gallery to evaluate its performance in another environment.

Findings of Assessments

The assessment tool I developed identified the same types of violations recorded in the U.S Department of Justice Settlement Agreements. See Chapter V for a full list of these violations

The assessment checklist developed for this research works well to address compliance issues and avoid litigation. This assessment tool would be useful to museums, art galleries, restaurants, concessions with restroom facilities, retail, and so on.

Compliance as a continual process can be addressed by responding to the following questions:

- What is the purpose and definition of ADA, ABA, and RA compliance?
- What process can be used to assess facility compliance?

- When deficits in compliance are found what needs to be done to address the issues? What is the timeline for addressing issues?
- How often should a facility check for compliance?
- Where is a good source of current, up to date information on the current laws and best practices for compliance?
- What are the expected financial resources or expenditures to maintain compliance?

By responding to these questions, a museum's leadership can develop its own policy about responding to the requirements of accessibility and the goal of universal design. Development of a policy that directly addresses up-to-date ADA, ABA law can guide a facility in its present and future planning and operations. For example, such a policy might read as follows:

Sample policy:

Bella's Landing, Obsolete Stuff in a Scenic Old Museum [BLOSSOM]

Policy Title: Facility and Exhibition Accessibility

Purpose: The purpose of this policy is to communicate the legal obligations of this museum LLC to provide inclusive access to both museum facilities and exhibitions for people with disabilities and to maintain compliance with these legal obligations.

Policy: This policy addresses two aspects of BLOSSOM LLC:

- A. Museum Facility: This permanent building shall be inspected by the facility Maintenance Director in his or her capacity as Facility and

Exhibition Accessibility Compliance Officer annually on [[Annual inspection date] or whenever:

- structural alterations are planned and/or completed,
- a complaint regarding the facility ADA compliance is registered,
- A change or update in ADA law occurs.

B. Exhibitions: All exhibitions whether permanent installations, temporary or rotating shall be reviewed and inspected by both the Museum Exhibit Curator and the Facility and Exhibition Accessibility Compliance Officer:

- During initial exhibit planning stage,
- After exhibit installation,
- Monthly for duration of exhibit,
- Anytime a complaint regarding the exhibit ADA compliance is registered,
- When any change or update to ADA law occurs.

Compliance plan:

All staff both paid and volunteer shall receive bi-annual in-service training in current accessibility compliance.

Compliance inspections shall utilize an up-to-date approved checklist. A compliance report shall be compiled from information gathered from checklist inspection. Any hazard or unsafe finding shall be brought to the Museum director for immediate action. The finished report shall be brought to the compliance committee for review and response. All current legal information gathered from DOJ

websites and other sources will be taken into consideration in the drafting of a plan to remediate deficits found during the inspection. Once the plan is formulated, an estimate for cost of changes will be submitted for approval to the museum board of directors.

This sample policy is only a beginning. As more and more museums step up to the challenge of constant vigilance for compliance and seek the goal of universal design there will be a need for innovative policies and procedures to address issues yet to be discovered.

In Conclusion

Over the years since the enactment of the Americans with Disabilities Act of 1990 several attempts have been made by various organizations to instruct museum administrators in their responsibilities to patrons with disabling conditions. These attempts came forth as “Best Practices Letters” from the US Department of Education and as informative publications from the Smithsonian Institution and the National Endowment for the Arts. Unfortunately academic training in only two of the 180 colleges and universities offering undergraduate and graduate certificate and degree programs in museum science mention accessibility.

Before the digital age of consumer electronics many applications benefiting patrons with disabilities were considered utopian ideals. One of these ideals was universal design. We have experienced the rapid evolution from analog to digital technologies in the matter of a few short years. Many of the analog systems once

only available on a personal computer (PC) are now common features on handheld digital devices like tablets and cell phones. Disability applications, such as text readers, screen magnifiers, voice to text, and retina control, are available to everyone. For the most part, mobility accommodations have fulfilled the promise of universal design.

Museums need to understand the costs of non-compliance and the return on investment of voluntary compliance. Federal laws are in place to protect and provide a safe and hospitable environment for all patrons. Just as it took time and punitive action to enforce the seatbelt law and the need for car insurance, museums will have to change how they do business. To facilitate necessary changes, in Appendix B, I have included hyperlinks to vendors of digital applications mandated by the DOJ in the Newseum, Inc., Settlement; links to disability advocacy organizations; and other resources, such as information on tax credits from the US Internal Revenue Service (IRS) for the purchase of assistive technologies (resources included in enclosed a CD found inside the back cover of this thesis). Establishing a curriculum for inclusive accessibility will eventually change the way museum professionals receive patrons with disabilities, but not for some time.

Currently, this whole process of active public engagement exists outside of the museum complex. The plan is to invite it in, to become an active member of an inclusive community and to achieve universal design for all visitors to all museums.

As I've mentioned before when a person experiences a life-threatening trauma, a spiritual awakening often takes place. One seeks to accomplish the goals

of one's life. Some become social workers, teachers, or medical providers. As I've mentioned I tend to process information differently than most people. I have practiced channeling my differences into becoming solution focused and self-advocating.

In the years I have pursued this masters at Central Washington University I have been pushed to my physical and emotional limits. Traumatic Brain Injury carries with it a lifetime of headaches, dizziness and reactivity to stress. Stress came in a multitude of forms from deadlines to unhelpful staff in diverse departments; from over-zealous security in the Frye Museum to indifferent officials. In the face of these difficulties I have been blessed with a sense of humor as a coping skill to deal with sometimes banal realities; that, and the good fortune of both new and old friends that support me.

I am inspired to be active in affecting change not only through this Master's Thesis, but also through new channels I have discovered along the way. Being solution focused I found several deficiencies in the laws I have reviewed in the course of this study. For example, upon realizing errors in the metrics of the ABA concerning the average width of an adult wheelchair at 26 to 28 inches and all the computations regarding the width of ramps, doorways and toilet rooms being based on this average adult size I then asked the question: what about larger wheelchairs? At the front entrance to the Kittitas Valley Hospital I found a manual wheelchair measuring 48 inches wide. Imagine how it would be for a museum to have a 48-inch wide wheelchair stuck in a 36-inch wide doorway. I posted my question to the U.S.

Access Board. This is the agency constantly working on revisions to disability law. Two weeks later the American Medical Association announced on June 18, 2013, Obesity to be a disease. (www.ama-assn.org/ama.../2013-06-18-ne, last accessed 10/03/14). The Equal Employment Opportunity Commission ruled in July of 2013 that people with this disease to be protected under the ADA, Title I, employment. (www.eeoc.gov/e, last accessed 10/03/14) Perhaps in the next revision doorways, ramps and other design features will reflect a larger metric. Another example from this research involves the DOJ requirement in the Settlement Agreements explored in Chapter V. The requirement is for each museum to have a staff position called a "Compliance Officer." DOJ outlines the duties of this person but does not specify how this person receives training. Again I posed the question to the U.S. Access Board. My question was where would a person receive this training and is it a licensed practice? To date no license is required. I then questioned the internet and found all sorts of opportunities to watch a short video and pay \$70 to receive a certificate. Hopefully, one day this training will be accomplished academically.

I have come to a reasonable conclusion to an earlier question. With so many publications available since the enactment of the ADA in 1990, and the desired outcome to avoid a costly litigation to force compliance with these laws, why have so few museums pursued inclusive programming? My answer must be the most obvious conclusion, the lack of a comprehensive compliance checklist. So my gift to the process of voluntary compliance lies with other resources included in the appendices.

May the journey to compliance for museums be less adventurous than my journey to present this material to them. Or it may be my power-chair stuck in the door.

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APPENDIX A
GLOSSARY

Glossary

Access Aisle	An accessible pedestrian space between elements, such as parking spaces, seating, and desks, that provides clearances appropriate for use of the elements.
Accessible	Reference to a site, facility, work environment, service, or program that is able to be approached, entered, operated, participated in, and/or used safely and with independence by a person with a disability.
Accessible Route	A continuous, unobstructed path connecting all accessible elements of a building or facility.
Ambient Light	The total amount of light in a space, including light from direct sources and light reflected from all surfaces in that space. Ambient light in most exhibitions is reflective.
Americans With Disabilities Act (ADA)	A comprehensive, federal civil rights law prohibits discrimination on the basis of disabilities in employment, state and local government programs and services, public accommodations, transportation, and telecommunications.
Assistive Listening System	Sound technology, usually found in auditoriums and theaters, that aids people of hearing individuals to better hear speakers or actors. This is an audio system utilizing transmitters, receivers, and coupling devices that transfer sound to the listener by means of an induction loop, radiofrequency, or direct wired equipment.
Audio description	Technique for informing visitors about the visual images and action on stage, or an exhibition space that are undescribed in the narration. See Appendix for Audio description symbol.

Auxiliary Aids and Services

Found under Titles III and III of the ADA, this includes a wide range of aids and devices that promote effective communication or allows access to programs and services. Examples of auxiliary aids and services for individuals who are deaf or hard of hearing include qualified interpreters, note takers, communication-aided transcription services, written materials, telephone handset amplifiers, assistive listening systems, telephones compatible with hearing aids, caption decoders, open and closed captioning, telecommunications devices for deaf persons (TDDs), videotext displays, and exchange of written notes. Examples for individuals with vision impairments include qualified readers, taped texts, audio recordings, Braille materials, large print materials, and assistance in locating items. Examples for individuals with speech impairments include TDDs, computer terminals, speech synthesizers, and communication boards.

Cane-detectable Barrier

A barrier used to warn people who are blind or have low vision of a hazard. A barrier is something detected by the cane before the individual reaches the obstruction or hazard with his body.

Captioning

Open captioning translates the audio portion of a video or film program into visible subtitles. Viewing does not require special equipment; the captions are present on the screen at all times. **Closed captioning** requires a decoder and display on a standard television receiver and can be switched on and off by the visitor on demand. See Appendix for closed captioning symbol.

Clear Floor Space

The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant.

Cognitive Disabilities

Disabilities that affect learning and socialization skills (e.g., mental retardation, learning disabilities, mental illness).

Cross Slope

The slope that is perpendicular to the direction of travel.

Curb Ramp

A short ramp cutting through a curb or built up to it.

Detectable Warning

A standardized surface feature built in or applied to walking surfaces to provide tactile elements to warn people with visual impairments of hazards on a circulation path.

Disability	As defined by the ADA and Section 504 of the Rehabilitation Act with respect to an individual: a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment
Footcandle (fc) and lux	Measurements of the visible light intensity on a surface some distance from a light source. One footcandle is equivalent to the illumination (an optical standard reference) at a distance of 305 mm (one foot). One footcandle is approximately ten lux. Footcandle is the imperial measure, while lux is a metric measurement for light intensity. Produced by one candle
Impairment	A term used in the ADA definition of disability. Includes any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more body systems, such as neurological, musculoskeletal, special senses, respiratory (including speech organs), cardiovascular, reproductive, digestive, genitourinary, immune, circulatory, hemolytic, lymphatic, skin, endocrine; or any mental or psychological disorder, such as intellectual disability (formerly termed "mental retardation"), organic brain syndrome, emotional or mental illness, and specific learning disabilities.
Kerning	In typesetting, adjusting the spacing between two characters.
Leading	In typesetting, the vertical distance between lines of type, measured in points
Letter spacing	The spaces between each letter in a word. Light Reflectance Value (LRV) is a term used to describe how well a surface reflects light. Contrast is calculated as a percent between foreground and background, e.g. light color on dark background. The standard for readability is a contrast of at least 70%. Readability is determined by the formula: $\text{Contrast} = [(B1 - B2) / B1] \times 100$, where B1 = light reflectance value (LRV) of the lighter area and B2 = light reflectance value of the darker area.
Lux	See "Footcandle (fc) and lux"

Major Life Activity

The terms used in the ADA a definition of disability. It refers to activities that an average person can perform with little or no difficulty. Major life activities include, but are not limited to: caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, sitting, reaching, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, interacting with others, and working; and the operation of a major bodily function, including functions of the immune system, special senses, and skin; and digestive, genitourinary, bowel, bladder, neurological, brain, respiratory, circulatory, cardiovascular, endocrine, hematic, lymphatic, musculoskeletal, and reproductive functions. The operation of a major bodily function includes the operation of an individual organ within a body system.

Marked Crossing

A crosswalk or other identified path intended for pedestrian use in a vehicular way.

Maneuvering Space

The minimum area needed for a wheelchair user to move into or out of or along a pathway.

Means of Egress

A continuous and unobstructed way of exit travel from any point in a building or facility to a public way. A means of egress includes vertical and horizontal travel and may include intervening room spaces, doorways, corridors, balconies, ramps, stairs, enclosures, lobbies, horizontal exits, courts, etc. An **accessible means of egress** is one that complies with ADA guidelines and does not include stairs, steps, or escalators. Areas of rescue assistance and evacuation elevators may be included as part of accessible means of egress.

Mitigating Measures

Medical treatment or devices that lessen the effects of impairment. When determining whether a person is substantially limited in a major life activity, we ignore the beneficial effects of mitigating measures except ordinary eyeglasses or contact lenses. Mitigating measures include things such as medication, medical supplies, equipment, or appliances, low vision devices (defined as devices that magnify, enhance, or otherwise augment a visual image, but not including ordinary eyeglasses or contact lenses), prostheses including limbs and devices, hearing aid(s) and cochlear implant(s) or other implantable hearing devices, mobility devices, and oxygen therapy equipment and supplies; use of assistive technology; reasonable accommodations; "auxiliary aids or services," learned behavioral or adaptive neurological modifications; or psychotherapy, behavioral therapy, or physical therapy.

Pica	A basic unit of typographic measurement representing 4.23 mm (1/6 pica equals 12 points (see "point size"). The pica is used for linear measurements of type.
Point size	A point is a unit of measure used principally for designating type size. In traditional typesetting a point is equal to approximately .35 mm (1/72 in.). In PostScript, used in DTP (desktop publishing), defines a point as exactly 1/72 in. The point size of a face is the distance from the top of its ascenders to the bottom of its descenders.
Power assisted Door	A door used for human passage with a mechanism that either helps to open the door or relieves the opening resistance of a door upon switch activation. Continued force applied to the door itself.
Private Entities	Places that operate public accommodations include restaurants, hotels, theaters, convention centers, retail stores, museums, performing arts centers, libraries, parks, zoos, amusement parks and private schools. They are covered under Title III of the ADA.
Public Accommodations	Entities that must comply with Title III. The term includes facilities whose operations affect commerce and fall within at least one of the following categories: places of lodging (e.g., inns, hotels, motels) (except for owner-occupied establishments renting fewer than 6 rooms); establishments serving food or drink (e.g., Restaurants and bars); places of exhibition or entertainment (e.g., motion picture houses, theaters, concert halls, stadiums), sales establishments (e.g., auditoriums, bakeries, grocery stores, hardware stores, shopping centers); service establishments (e.g., laundromats, dry cleaners, banks, barbershops, beauty shops, travel services, shoe repair services, salons, parlors, gas stations, offices of accountants or lawyers, pharmacies, insurance offices, professional offices of healthcare providers, hospitals); public transportation terminals, depots, or stations (not including facilities for air transportation); places of public display or collection (e.g., Museums, libraries, galleries); places of recreation (e.g., parks, zoos, amusement parks); places of education (e.g., nursery schools, elementary, secondary, undergraduate, or postgraduate private schools); social service centers; and establishments (e.g., day care centers, senior citizen centers, homeless shelters, food banks, adoption agencies); and places of exercise or recreation (e.g., gymnasiums, health spas, bowling alleys, golf courses).

Public Entities	This includes any state or local government and any of its departments, agencies or other instrumentalities. They are covered under Title II of the ADA.
Reasonable Accommodation	Under Title I, a modification or adjustment to a job, the work environment, or the way things usually are done that enables a qualified individual with a disability to enjoy an equal employment opportunity, or under Title II, a change in policies, practices, or procedures, or the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, that is necessary to enable a qualified individual with a disability to participate in the program or activity. Reasonable accommodation is a key nondiscrimination requirement of the ADA.
Readily Achievable	This means it is easily accomplished and able to be carried out without undue difficulty or expense. What is readily achievable or constitutes a barrier is determined on a case-by-case basis in light of the resources available. The case-by-case approach takes into account the diversity of needs of the enterprises covered by the ADA Titles I, II, and III and Section 504, as well as the wide variation in the economic health of particular entities at any given moment.
Running slope	The slope that is parallel to the direction of travel.
Serif	The short cross lines at the ends of the main strokes of many letters in certain typefaces. <i>Sans serif</i> are letters without the cross lines.
Short person	A person who might formerly have been known as a "dwarf" or "midget" and who is perhaps under 1015 mm (40 in.) tall.
Sightline	The line of view between a person in an audience and a performance area or displayed item.
Signage	Displayed verbal, symbolic, tactile, and/or pictorial information.
Slip resistant	Surfaces that will permit an individual to walk across without slipping. Materials that may be adequate to make level surfaces slip resistant might be inadequate on sloping surfaces.
Tactile	Permits examination of an object that can be perceived using the sense of touch.

TTY (preferred term), or TDD (Telecommunications Device for the Deaf).	These communication machines are also called "text telephones." TTY is an interactive graphic (i.e. typed) communications through the transmission of coded signals across the standard telephone network. The TTY, or teletypewriter was the equipment first utilized by a deaf inventor as a communication tool for deaf people. See Appendix for TTY symbol.
U.S. Department of Justice	A federal agency that is responsible for enforcing Titles II and III of the Americans with Disabilities Act.
Vitrine	A freestanding pedestal with a five sided, clear top. The top has no lip or overhang.
Wheelchair Space	Space for a single wheelchair and its occupant.
Word spacing	The space between words in a line of text.
X-height	The height of a typeface's lower case letters exclusive of ascenders and descenders. The height of the lower case "x" is often measured since it sits directly on the baseline and has neither descenders or ascenders. Although not a unit of measurement it is important since it is the X-height that controls the visual impact of the type size. Faces with a high X-height tend to look more compact.

APPENDIX B

INTERNET LINKS AND RESOURCES

The following links will explain these auxiliary aids and services:

assistive listening
[www.audiolinks.com/listening devices](http://www.audiolinks.com/listening-devices)

assistive listening device
www.Amazon.com/electronics-accessories

assistive listening devices
www.issproducts.com/category/assistive-listening-devices

assistive listening systems and devices
www.listentech.com

personal assistive listening amplifiers
www.Harriscomm.com

assistive listening
www.Williamssound.com/assistive_listening

hearing assistive technology
www.Asha.org/.../Hearing/

assistive listening systems and devices
www.nad.org/.../Assistive-listening

digital assistive listening and hearing devices
www.comfortaudio.com/US/

assisted hearing systems
www.abbn.com

assistive listening systems
www.BHphotovideo.com/.../Assistive-listening-system

assistive listening systems
www.califone.com/assistive_listening.PHP

assistive listening systems
en-us.sennheiser.com/integrated-systems-assistive-listening-system

magnifying software
www.freedomscientific.com

Screen magnification systems
www.afb.org/prod/browse_cat_results.asp

zoom text
[www.Alsquared.com/Zoom text](http://www.Alsquared.com/Zoom%20text)

virtual magnifying glass
magnifier.sourceforge.net

screen magnification software
[HTT PS://nfb.org/images/.../BM 080108.htm](http://HTTPS://nfb.org/images/.../BM080108.htm)

screen magnification software
www.independentliving.com

screen magnifier software
www.iconico.com/magnifier

screen negative occasion software
www.bcab.org.uk/using-a-computer/.../Screen-magnification-software

automated captions
www.automaticsync.com

closed captioning
www.telestream.net

open captions
www.cinnetyp.com/captions.HTML

captions for deaf and hard of hearing viewers
www.nicd

open captions
www.playmakersrep.org

captions transcripts and audio descriptions
www.Webaim.org

Closed captioning and CART
www.archivereporting.com

Captioning service
www.accreditedlanguage.com/captioning

Real-time captioning
www.Prince Institute.EDU

what is real-time captioning?
www.Washington.edu/do it/faculty/articles? 386

real-time captioning
www.Van an captioning.com/real-time-captioning

real-time captioning
www.disability services.Colorado.EDU

quick caption real-time captioning
www.quickcaption.com/realtime captioning.ASP

real-time captioning
www.DCMP.org/caai/nadh 28.pdf

CART (computer aided real-time translation)
www.state.nj.us/human services/ddhh/newsletters

optical reader
www.pc mag.com/encyclopedia/term/48547/optical-reader

screen reader software review
www.thenextWeb.com/.../Microsoft-offering-visually-impaired

what is a screen reader?
www.nomensa.com/blog/2005/what-is-a-screen-reader/

text reader software
www.nextup.com

computer screen readers
www.boundless at.com/screen reader

text to speech
www.naturalreaders.com

JAWS screen reading software

www.freedomscientific.com/products/FS/JAWS-product-page.ASP

screen reader

www.screenreader.net

non-visual desktop access

www.nvaaccess.org

free screen readers

www.usabilitygeek.com/10-free-screen-reader-blind-visually-impaired-users/

video text

www.museum.TV

teletext

www.iml.jou.ufl.EDU

video text on-screen display

www.decadenet.com/Bob2/Bob2.html

how to display pictures, video, text, and audio all on the same screen

www.stackoverflow.com/.../How-to-display-pictures-video-text

APPENDIX C
ASSESSMENT CHECKLIST

How to use this checklist

Before you begin to explore a museum complex, art gallery, or other form of public accommodation you will need to obtain a floor plan and assess the architectural design features. Each section of the assessment is shown here on separate pages. When planning an assessment, copy the sections that apply to the facility. If there are multiple areas concerning the same section of the assessment, (e.g., there are multiple buildings, several hallways, exhibits or restrooms) make a copy for each individual area to be assessed. Number the pages according to your path of travel as you begin. You will need a clipboard, several number two pencils, a 50ft tape measure, and a portable hanging fish scale. Fish scales, available in digital or spring styles, are used as a tool for measuring the force required to pull open a door. To use the fish scale place the hook on the door handle and pull the door towards you. As the door opens record the number of pounds of force it took to open the door. Should you decide, a voice recorder is also useful for keeping track of the location of design features.

FULL ASSESSMENT FOR MUSEUM ADA COMPLIANCE

1. Outside Area and Parking

MEETS	DEFICIENT	Description	Facility Measurement
		Accessible route from parking to the museum entrance	
		Condition of pathway: cracks, holes, bumps or debris, if deficient, please comment:	
		Designated accessible parking spaces with adjoining curb cuts	
		Accessible route from parking to the museum entrance	
		Condition of pathway: cracks, holes, bumps or debris, if deficient, please comment:	
		Ramped; slope compliance?	
		Elevators: physical disability accessible compliance?	
		If not accessible, clear signage with directions to accessible entrances	
		Door: at least 36 inches wide in open position	
		Threshold: Not higher than 1/2 inch	
		Threshold: beveled if higher than 1/4 inch	
		Door opening force measurement no greater than 5 pound-feet	

2. Reception Area

MEETS	DEFICIENT	Description		Facility Measurement
		Reception counter: Wheelchair accessible 26 inches minimum -36 inches high max:		
		Restrooms:		
			Wheelchair accessible sinks, soap and paper dispensers	
			Wheelchair accessible toilet stall, 60 inches clear circle or T-turn floor space, free door swing	
			All doors opening force measurement not greater than 5 pound-feet	
		Water fountains: no fewer than 2, max height from floor 36 inches:		
		<i>Assistive and adaptive equipment availability:</i>		
			Wheelchairs	
			Audio tours	
			Assistive listening systems	
			FM systems	
			Infrared systems	
			Open captioning	
			Closed captioning	
			Sign language interpreters	
			Computer-aided real time reporting (CART)	
			TTY	
			Telephone amplifiers	
			Large print	
			Appropriate signage for assistive and adaptive devices	
			Appropriate signage for assistive and adaptive devices	
			Audio tours	
			Large print	

3. Hallways

MEETS	DEFICIENT	Description		Facility Measurement
		Hallways a minimum of 5 feet wide		
		If door, door opening force measurement no greater than 5 pound-feet		
		Carpet: attached to floor, no more than 1/2 inch thick		
		Rounded corners on walls		
		<i>Accessible seating:</i>		
			Circular or curved	
			Clear width between rails 36 inches minimum	
			Rise greater than 6 inches has rails	
			30 inch vertical rise maximum	
			Ramps that change directions have landings	
			Landings are 60 inches square	
			Edge protection	
			Handrail Extensions of 12 inches at top and bottom of ramps	
		<i>Stairways:</i>		
			Risers 4 inches-7inches maximum	
			Treads 11 inches minimum	
			Visual contrast on leading edge of stair tread	
			Nosing of 1/2 inch max	
			Nosings curved or beveled on underside	
			Handrail on stairs: height 34 inches minimum-36 inches maximum	
			Handrail: gripping surface had rounded edges	
			Top extension on stairs 12 inches to end above the first nosing	
			Bottom extension 12 inches minimum beyond last riser	

4. Displays and Exhibits

MEETS	DEFICIENT	Description		Facility Measurement
		Top of display 36 inches maximum above floor		
		Exhibition barriers at 36 inches high		
		Tactile experiences included in every exhibit		
		Tactile object represents exhibited item		
		<i>Label design and text:</i>		
			Plain English, Active voice	
			Sentences of no more than 25 words	
			Overview sentence in large print	
			Text printed on non-glare surfaces	
			Text 48 inches minimum and 67 inches maximum above floor	
			Text font: 18 point min, 24 point maximum size	
			Type of font: Arial or Helvetica	
			Text set in all caps, script or italics	
			Consistent letter and word spacing: justified left margin only	
			Wall mounted labels between 48 inches and 67 inches from floor	
			Mount label rails so the top of the label is at 40 inches	
			Contrast between text and backing	
			High contrast between text and background	
			Tittles and decorative heads	
			Label design available in other formats: braille, audio	
			Labels located at consistent locations throughout exhibition	
			Label length should have a maximum of 55 characters per line	
			Labels mounted so patrons can get close to them, mounted as close to front as possible	
			Labels at 45 degree angles to the front	
			Label defined with color or raised surface	
			Shadows on labels	

4. Displays and Exhibits continued

MEETS	DEFICIENT	Description		Facility Measurement
			Provide all audio narration in a print format	
			Captioning: interactive w/o soundtracks, must be labeled as not having soundtrack	
			Instructions must be written in short sentences, step-by-step format	
			Present all instruction in audio and printed format	
			Glare on interactive instructional surface	
			Controls for interactive forward approach from a wheelchair: 15-48 inches above floor	

5. Children's Area

MEETS	DEFICIENT	Description		Facility Measurement
		If door, door opening force measurement not greater than 5 pound-feet		
		<i>Circulation:</i>		
			44 inches minimal in single direction	
			Route 88 inches minimal for passage of 2 wheelchairs	
			Passing areas 74 inches minimal every 100 feet	
			Carpets 1/4 inch thickness maximum:	
		<i>Seating for children with back and arm support and:</i>		
			Interactives usable from a forward approach with 36 inches max high reach and 20 inches maximum low reach:	
			Prekindergarten : 8-12 inches high:	
			Kindergarten and older: 12-17 inches high	
			Tables, counters and work surfaces clear knee space 24 inches deep, 24 inches high and 30 inches wide:	
			Adjustable height work surfaces	
			Cases, text and labels to a child's wheelchair user's eye level (6-9years old): 48 inches above the floor	

6. Cafe or Bookstore

MEETS	DEFICIENT	Description	Facility Measurement
		Directional signage no higher than 48 inches above floor	
		Meets general ADA accessibility requirements for retailers.	
		Cashier counter: Wheelchair accessible 26 inches minimum -36 inches high max	
		Lay-out of store floor and displays are safe for cane and wheelchair users	
		If door, door opening measurement not greater than 5 pound-feet	

7.Exits, building and safety codes

MEETS	DEFICIENT	Description	Facility Measurement
		Number of accessible emergency exits from exhibition space must meet the National Fire Protection Association, Life Safety Code (NFPA 101)	
		Inaccessible exits are required to provide directions to those exits that are accessible or to areas of rescue assistance	
		Provide areas of rescue assistance if the number of exits is insufficient	
		<i>Fire alarm systems:</i>	
			Visual and Audible alarm
			Visual flash rate between 1Hz and 3Hz (5Hz can trigger seizures in some people)
			If multiple number of visual alarms in area, all synchronized to avoid above

8. Exits and signage

MEETS	DEFICIENT	Description	Facility Measurement
		Notification about location of accessible egress from the gallery must be available at key points in the museum	
		Make available at key points within the museum an exhibition floor plan that meets accessibility requirements for printed materials	
		Provide signs with the international symbol of access at accessible emergency exits	